

Crisis package for medical institutes

by Robin McKie
and Ngaio Crequer

Plans have been drawn up to introduce a programme of early retirements and redundancies at London's crisis-hit postgraduate medical institutes. These will be implemented, and several institutes may have to close, unless the Government agrees to alter its policies for funding higher education centres.

This year the institutes - the Royal Postgraduate Medical School, the London School of Hygiene and Tropical Medicine, and the 13-member Institute of the British Postgraduate Medical Federation - will lose an estimated £3.8m. It is expected the loss will be repeated next year, Mr David Innes-Williams, director of the federation, warned this week.

"We can scrape by on our reserves this year but we will be in severe trouble in the next two years unless something is done," he added. Mr Innes-Williams highlighted three major institutes - child health, cardiology, and psychiatry - which he felt were particularly vulnerable, although all institutes would have to make major cuts unless the Government reversed its present policy over the funding of overseas students.

This point was pressed by London University's vice-chancellor Lord Annan at a meeting this week with Mr Mark Carlisle, Secretary of State for Education and Dr Gerard Vaughan, the Health Minister. No agreement was reached at the meeting although both ministers agreed to consider the facts presented.

The institutes are particularly alarmed because they feel they cannot realistically price overseas student fees at £10,000 per person as this would result in a drastic drop in numbers. By fixing fees well below this, they are suffering a major cut in their £9m annual grant from the university.

This means redundancies will be implemented and on a large scale unless the Government helps out. This loss of manpower will weaken the institutes' research capability and will mean they will no longer be able to attract research grants, another important source of income.

The University Grants Committee has agreed to make some extra money available, but the federation only on the condition that it is used to pay for redundancies and staff retirement. This will have to be agreed by the senate of London University.

One of the worst hit institutes is Laryngology and Otolaryngology where six members of staff have already been made redundant or retired early. The institute had a cut in income of 20 per cent this year, and faces a similar cut next year.

Miss Anthea Pallant, secretary of the institute said: "This year we think we can manage to get through but next year we are bogging in horror at the size of the cut. The University Grants Committee started to reduce support for the smaller institutes in 1979. I do not think they want us, but nobody has come up with a good reason why we should be closed. We are international centres and we want to keep our identity."

APT lobbies the Commons

by David Jobbins

The Association of Polytechnic Teachers this week continued its campaign for seats on the Burnham further education committee with a lobby at the House of Commons.

The case for an answer to its claim for recognition before the Easter recess was put to 60 MPs by the 40 APT supporters. An announcement is to be made in the near future, according to the Department of Education and Science.

APT, which claims 3,000 members in England and Wales, has won joint recognition with the National Association of Teachers in Further and Higher Education at Ulster Polytechnic after a year of negotiations.

But the hostility between the two unions is unlikely to end as a result. In England and Wales NAFHE is to continue to refuse to share in any negotiating forum with the non-TUC union.

Although currently excluded from the talks on the future of Burnham, which began last week, APT has suggested to Mr Mark Carlisle, Secretary of State for Education, that there could be a three-tier negotiating machinery with a separate committee to deal exclusively with the polytechnics.

NEXT WEEK

Whatever happened to cybernetics? The mis-education of tomorrow's architects.

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CLEA commands poly heights

by Peter David

Local government leaders formally told the Government this week that they intend to set up a national body with a large secretariat to run higher education in the public sector.

In a document sent to Mr Carlisle, Secretary of State for Education, council leaders say that polytechnics and colleges would continue to be funded by local education authorities, and that the new body's composition would reflect the commanding role of local government.

The plans, approved by the Council of Local Education Authorities and both the Association of Metropolitan Authorities and the Association of County Councils, have been speedily prepared to counter Government's plans leaked two months ago to remove 98 major institutions from local authority control.

Under the CLEA proposal a powerful national body would be responsible for approving and funding the academic programme of all major public sector polytechnics and colleges.

Once established, the body would take over all the work previously carried out by the joint DES/local authority pooling machinery. There would have to be legislation to set the body up but it should be kept to a minimum, the paper says.

CLEA maintains that there is a strong educational case for keeping local government's stake in higher education. Colleges removed from local government in the past had ceased to do relevant work and the remaining colleges had been forced to grow a "new top", the paper says.

There were also important links between higher education and the remainder of the education service

which could best be maintained through local authority control.

In a section on the finance and staff of the new body, the CLEA document says it would raise funds by levying contributions from all local education authorities on a formula basis similar to the existing pooling system.

In addition to councillors, the body would have representatives of the voluntary sector, industry and commerce, professional groups representing principals of institutions and teachers. It would maintain strong links with the DES and the University Grants Committee.

Calling for an urgent meeting with the Secretary of State to discuss the proposals, CLEA says it has consistently advocated the establishment of such a body, and had created its Higher Education Group in 1980 as "a first step".

Leader, page 17



Twenty-four Scottish students at Downing Street after a 448 mile march from Falkirk. The students from Callendar Park College of Education handed in a petition to the Prime Minister protesting at the planned closure of the college in June.

Optimistic colleges forecast

by Olga Wojtas
Scottish correspondent

Provisional figures for next year's student intake in Scotland's education colleges reveal the primary intake reduced by 110 and the secondary intake by 70.

These figures are surprisingly liberal, given the Government's decision to close Callendar Park and Hamilton colleges and merge Craiglockhart. The total intake this session for these three colleges was 170 primary students and 75 secondary students.

The Scottish Secretary is expected to make an announcement before the Easter recess on the division of the new intake among the seven remaining colleges.

Colleges will also be advised on which subjects should be given highest and lowest priority for intending secondary teachers. High priority subjects will be business studies, mathematics, music, physics, religious education and technical education, lowest priority will be biology, geography, history and modern studies.

These lists are similar to those for this session, with the exclusion of chemistry from the high priority subjects, and English being replaced by biology in the low priority list.

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Poly helps plan new university

One of the biggest overseas contracts of its type ever to come to a British institution has been won by the Polytechnic of Central London. Salfat PCL have been given the job of producing a complete academic plan for a new university in Nigeria.

The Polytechnic has specialised in consultancy work abroad, carrying out similar work in Singapore and Baghdad, but the present operation is its first to entail sole responsibility for all academic services and accommodation.

Although the value of the contract remains a closely-guarded secret, Colin Adamson, rector of PCL, admits that this and other overseas schemes will enable the polytechnic to maintain a more favourable staff/student ratio than normal. Its turnover on work abroad and other client contracts is more than £1.5m per year.

The institution, the Federal University of Technology at Akure, is one of three being planned in Nigeria. Dr Adamson and four colleagues have spent a week with the vice-chancellor discussing the project and will produce an interim report before the end of the month.

Academics from the life sciences, instrumentation, computation, engineering and technology departments are all involved in the operation, together with outside specialists in agriculture.

Although the university will be sited at the outset, taking 175 students at converted college premises, in September, the contract will give PCL a foothold in one of the fastest growing academic markets in the world. Nigeria has embarked on a rapid expansion of its higher education system, providing a university in every state as well as other institutions.

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Polys and universities fight for share of Government cash

Fierce competition has been developing between the universities and the public sector behind the scenes in the past fortnight as both sides have met the Department of Education and Science for talks on Government spending plans after 1982.

Local government leaders and polytechnic directors fear that the strong political campaign against the cuts being mounted by vice-chancellors and the University Grants Committee might force Mr Carlisle, Secretary of State for Education, to abandon his policy of even-handed treatment for both sides of the binary line.

Some members of the UGC are prepared to resign rather than preside over the dismantling of the university system which they believe is demanded by the Government spending plans.

The committee is still pressing for an undertaking that more money will be available after 1982 to give the system a chance to contract and reorganise without institutions being bankrupted by massive redundancy payments.

The White Paper published in March promised an extra 8 per cent reduction in higher education spending by 1984, but failed to apportion the cuts between the sectors after 1982. There is growing uncertainty in the public sector as to how the Government will interpret its existing commitment to "even-handedness".

Local government officers raised the question at a meeting last week when a DES team spelled out the implications for the public sector of the spending cuts outlined in the White Paper.

In a document setting out detailed spending forecasts the DES estimated that spending on polytechnics and colleges would have to be cut by between £40m and £45m below the levels set out in the previous White Paper.

But because that White Paper had already proposed cuts which had not been fully implemented, the public sector would now have to accept even bigger cuts, "probably £60m or so over the period between 1980-81 and 1983-84".

Also contained in the DES paper were two "scenarios" for meeting the new cuts. Described as "purely illustrative" they both call for the disappearance of 3,000 lecturer posts by next year.

One scenario then calls for the loss of one in five jobs (5,700) between the current year and 1984, implying a 20 per cent squeeze in staff/student ratios. The other calls for a 15 per cent squeeze in ratios implying the loss of 4,900 jobs.

The scale and speed of the forecast cuts have startled local government officials, who are demanding to know whether the universities will be confronted with equivalent reductions.

Meanwhile, polytechnic directors are to ask for special treatment for the polytechnics to protect their vocational and technological courses.

At its conference at Sheffield Polytechnic last week the Committee of Directors of Polytechnics told Mr Neil Macfarlane, under secretary for education and science, that polytechnics earned £7m last year from contracts with industry.

Dr Ray Ricketts, the committee's chairman, said: "If the Government is really serious about the views it expresses to support industry and commerce, it must come off the fence and start discriminating in favour of the polytechnics."

He said there was no point in a policy of even-handedness if polytechnics started from a base line well below the university sector. "Even-handedness may only restore the differentials. We need a radical re-think now."

The UGC main committee also met last week to decide how to implement the cuts for next year. They considered delaying a final decision until they heard from the Government about spending in the following years, but still intend to aim for an announcement in May.

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NHS deal could mean more for lecturers

University lecturers may try to reopen talks on their latest pay settlement if their clinical colleagues are awarded more following an independent review of National Health Service doctors' and dentists' salaries.

When the Association of University Teachers reached agreement with the Government earlier this year, it reserved the right to examine the award in the light of the forthcoming settlement on clinical salaries, due to be paid from April 1.

Both the AUT and the university employers are now awaiting the report of the Doctors and Dentists Review Board, which will form the basis for talks on clinical salaries. When it is published, together with the Government response, negotiations will begin between the cash-starved universities and the AUT/British Medical Association/British Dental Association consortium representing clinical staff.

The report is normally published during April, and although the board is an independent body, it is known that it is under pressure not to exceed the Government's aim of "middle single figures" not far away from 6 per cent.

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Rent strikes predicted as hall prices rise by 30 per cent

by Paul Flather

Halls of residence will be forced to close during the next academic year as the gulf between what students can afford and what colleges and polytechnics have to charge becomes too wide.

The Government was poised this week to announce a 7 per cent increase in student grants for 1981-82, while hall rents and meal prices rise by 20-30 per cent.

The National Union of Students has bitterly condemned this new huge cut in students' living standards, and has promised full support to students who withhold rents in order to stay on at college. The NUS wanted a 21 per cent rise in grants.

Mr David Aaronovitch, president of NUS, has predicted a wave of rent strikes from next September. "If students find the only way to stay on at college is by refusing to pay their rent, then we will support and encourage them," he said.

The problem for colleges is that local authority associations have withdrawn a subsidy worth £20m for catering and residence facilities with effect from September and have ordered colleges to break even or find the deficit themselves.

Last week polytechnic finance officers meeting in Sheffield put catering at the top of their list of current difficulties. They conceded that the new arrangements will mean certain increases of 20-30 per cent, well beyond the means of many students.

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Council cuts threaten future of town planning

by Robin McKie
Science correspondent

The quality of civil engineering and town and country planning is threatened by major cuts in applications for university courses in these subjects as a result of severe reductions in local authority spending on construction.

Figures published by the Universities Central Council on Admissions this week show that among British candidates only 2,554 applications were made for civil engineering courses, a drop of 15 per cent on last year, and only 970, a drop of 13 per cent, were made for planning courses. On top of this civil engineering suffered a 40 per cent cut in overseas applications.

In both cases severe reductions in Government capital grants for local authority building programmes have been blamed for causing the crisis. Frequently firms have cut down on intakes and training places for civil engineering graduates and this trend has eventually filtered through to school leavers and other potential applicants.

Now the Institution of Civil Engineers is writing to all employers who have made particularly drastic reductions in places for graduates to warn them that they may face a critical shortage of trained and qualified manpower in five or six years when the construction industry may have recovered. "There is a danger the whole industry could be caught on the hop," said Brigadier Denis Begbie, director of professional interests at the institution.

He added that even if there was a corresponding 15 per cent reduction in numbers of civil engineers eventually qualifying, this would not be serious as there is an overproduction at present. The real problem lay with the threat to the quality of those applying for courses and some universities were now very concerned about this threat.

Brigadier Begbie also warned of large cuts in overseas student numbers studying civil engineering at British universities could affect UK industry in the long run. "Important contacts are made at university which subsequently prove to be valuable in later business life," he said.

A similar problem facing town and country planning was outlined by the secretary for internal affairs at the Royal Town Planning Institute, Mr Charles Heald. He believed redundancies at some universities and polytechnic planning schools were "a distinct possibility" as a result of severe reduction in student numbers.

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Recruitment policy threatens research

by Ngino Crequer

There was a strong possibility that universities and colleges in the 1990s will be staffed by an aging, demoralized, decadent, cynical, time-serving academic profession, Professor Gareth Williams warned last week.

Professor Williams, head of the department of educational research at University of Lancaster and chairman of the Society for Research into Higher Education's national enquiry told the Conference of University Convocations meeting at Aston University that universities faced problems of survival and revival in the 1990s.

"The 1980s risk being a decade in which there is virtually no recruitment of new staff. The effect of this on postgraduate study and ultimately on the nation's research capacity would be appalling."

Room had to be made for new staff and greater mobility for existing members. Universities could also "be more diligent in monitoring staff performance and easing out lecturers and professors whose mid career performance is not satisfactory. I do not see that this need be in any way incompatible with legitimate academic freedom."

Professor Williams also urged the Government, the University Grants Committee and the universities to create an "innovation fund." For example, one per cent of total recurrent income could be held back by the UGC and competed for by any university.

He said that the Robbins principle had been a powerful rhetorical and political device. "It encapsulated the aspirations of growing numbers of young people and their parents who saw higher education as the avenue to a better life. Such pressure from the more articulate segments of society has been a powerful political appeal. Today there is no such pressure," he said.

Professor Williams said the slow growth of universities in the 1970s and their problems had been exacerbated but not caused by the recent public expenditure White Paper.

"Revival if it comes will depend either on the articulation of politically convincing criteria that are indepen-

dent of student numbers or on the development of an image that attracts large numbers of people who at present see insufficient personal benefit from undertaking further study," he said.

A population decline from 1984 and the absence of a convincing reason to expect a big increase in the participation rate meant a case could be made in favour of starting the cuts earlier rather than later. They might be criticized for reducing opportunities for school leavers but most university criticism had not been made on these grounds, he said.

The critical question of the 1980s was the role of the state in financing higher education and the volume of state resources, their distribution and the mechanism for allocation. Professor Williams put forward three models to guide financial provision: the market model; the bureaucracy model; and the good life model.

Under the market model, universities sell services, mainly teaching and research. Universities could form cartels (like agreeing not to advertise courses) or try to drive competitors out of business.

"I have no direct evidence of this happening but some of the disputes between universities and polytechnics seem to be hotting up nicely. So do some of the remarks attributed to vice-chancellors of well established universities about the new universities," he said.

Criticism pointed to the inequality of spending power among consumers and their ignorance of the range of products available. "One had purchase stays with the student during his whole life," said Professor Williams.

The bureaucracy model took intervention further and saw universities as essentially Government departments. Government control with safeguard should not be rejected out of hand although there were practical problems as bureaucracies took decisions out of administrative convenience and political in-fighting.

The good life, or Oxbridge model, was the favourite of academics, where the university exists to be rather than like a service. Here the student was rather like a novice monk, apprenticed to learn the mysteries of a cultural heritage, learning what his superiors think he should learn.

Graduates consider fund-raising

Former graduates should consider whether they have a role as a lobby for the universities, as fund-raisers, and as a means of improving contact between institutions and the community. This idea was put to the conference Professor Frederick Crawford, vice-chancellor of Aston University.

Who, he asked, could best put the public case for the universities? "The Committee of Vice-Chancellors and Principals is not a very effective organisation. It has a measure of informed thought but it represents strong vested interests in the universities and it is not likely to be considered to have 100 per cent integrity in its views."

As for the academics, there were elements of self-interest in what they said. Another possibility was the employers of graduates but it would be difficult to mobilise them to speak on behalf of the universities.

"So that brings me, to you, the convocation. Who knows better than you the value of the universities, who would make a better group to speak on their behalf, and who represents such large numbers of universities?"

He said that the financial well-being of the university depended on a wafer-thin financial margin. But this also implied that there was not a large amount of money which had to be found to restore the balance.

"The academic world has been virtually paralysed by the damage of the cuts. It is not used to asking for money. It somehow seems embarrassing to ask for money from anyone other than the Government," he said.

DES concern over fees policy

The Government is worried that spending cuts proposed for the universities are dissuading student admissions from Britain and encouraging universities to fill up with overseas students.

A hint of the concern, and a possible change in the policy for overseas students came from Mr J.D. Thompson, under-secretary at the Department of Education and Science, at the Aston conference.

He said an inter-departmental group, involving the DES, Foreign Office and the Treasury were monitoring the effect of the overseas student policy, and the question was whether the spending cuts would mean any changes.

"It seems to be a reasonable assumption that the public expenditure restraint in prospect will put in question the admission of overseas students. In other words it will no longer be the case of looking at overseas students in isolation, but whether the overseas policy was changed, their admission would be in more competition with the admission of home students."

He said it had been agreed that the Overseas Students Trust, specially placed because they were not beholden to Whitehall, should be encouraged to undertake more studies concerning the policy and to look at options for excluding some categories of students from the policy.

"It would be unrealistic to run any operation which was going to change the fundamentals of the policy, but there are options that can be run."



Firm sponsors management centre

A management centre built entirely from money donated by industry is to open in October at Nene College, Northampton.

The £1.5m needed for the project was given by the Bernard Sunley Charitable Foundation, which derives its income from Blackwood Hodge Ltd., the earth moving equipment distributors. The centre will include residential as well as teaching accommodation and will offer a range of long and short courses.

It will also provide courses of local relevance and will also operate coun-

selling and consultancy services for the unemployed.

Among those who have accepted visiting fellowships at the centre is Mr Bill Sims, general secretary of the Iron and Steel Allied Trades Confederation. The posts will be launched in 1982 through sponsorship by a firm of paper distributors based in Northampton.

Pictured with a model of the new centre are, from left to right, Dr Eric Ogilvie, director of Nene College, Mr William Shapland, chairman of Blackwood Hodge, and Mr J. Gammaux, the architect.

Psychologists urged to get up to date

by Robin McKie
Science Correspondent

Psychology is afflicted by old fashioned divisions and must involve itself in some of the greater challenges of today - unemployment, the disabled, poverty and the Third World, said Professor Kevin Connolly, in his presidential address to the annual conference of the British Psychological Society at Surrey University.

"A major and difficult task ahead of us is to organize teaching, research and professional services to begin to meet these needs," added Professor Connolly, of Sheffield University.

He said that in coming years, unemployment could become an everyday

experience for young and old. Apart from financial benefits, regular employment provided: a daily time routine; regular contacts and shared experiences; personal status; and enforced activity. "From this perspective it is easier to see why work is psychologically supportive and unemployment is psychologically destructive."

Too little was known about the long-term effects of unemployment, said Professor Connolly, and in future this area must be investigated, as well as exploring ways to help people cope with unemployment.

Similarly, too little study was being carried out into the psychological development problems facing those who

have to grow up with serious disability.

Professor Connolly also criticized psychologists for their lack of concern for the Third World. "They have been conspicuous by their inactivity in the problems of developing countries," he added.

In particular, Professor Connolly suggested there should be collaboration between psychologists to investigate associations between nutritional deficiencies in diets of children and behavioural problems. "We also need to investigate means of affecting the psychological rehabilitation of children who have suffered chronic protein malnutrition."

Factors behind clever children Students put freedom first

Environmental influences have more impact on children's IQs than the intelligent they are, delegates were told.

Dr Joan Freeman, a psychological researcher at Manchester University, said this conclusion was "shriekingly obvious" from the data she had collected as part of her research. She had measured the intelligent quotients of 210 children using the Stanford-Binet IQ test, which gives a strong measure of verbal ability, and compared them with results from a matrix test which allows children to compare patterns and measures their capacity for logical thought.

"With children who had poor home environments the differences between their scores on the two tests became increasingly obvious: with the more intelligent and able children," she added, "there were some highly significant differences in this area."

Dr Freeman said that the differences became really obvious with children with IQs over 140. "These people only account for 2 per cent of the population, but it is the 2 per cent that governs our universities and all the top

levels of our civil service."

"It was therefore crucial that we made the most of these highly able children and attempt to compensate for their poor home environment. These children could easily be identified through teachers administering tests of logical ability. Such as matrix tests, and the highly able dealt with appropriately, although not in separate schools."

"Using IQ tests on their own is quite insufficient and misleading for they give measures of so much that is socially learned and influenced."

Dr Freeman also stressed that poor home environments were related to social classes. The important factors were the cultural influences within homes and what general intellectual stimulation was provided.

"Quite simply, environment gets more important as kids get brighter. If they are intelligent they can extract so much more from what is going on around them and can make so much more of any stimulation," added Dr Freeman, whose book, *Clever Children: A Parent's Guide* is to be published later this year.

Less able losing out on training

People at the bottom of the unemployment pile are being turned away from courses specifically set up to improve their reading, writing and counting skills, and conference in London last week.

This is because new Government guidelines for preparatory training opportunities courses are restricting entry to the more able, it was claimed at the conference organized by the National Association of Adult Continuing Education to pre-TOPS courses aimed at unemployed women and men whose low educational standards prevent them from keeping a job in qualifying for training.

Ms Sheila Leavers of North Herts College said the new B-mock restriction on pre-TOPS courses imposed by the guidelines was excluding large number of people who are unable to meet the required standard within the time limit.

Another major concern was the lack of consultation between Manpower Services Commission and the providers of the courses. Delegates complained bitterly of inexperienced staff in local Job Centres who are unaware of how to interpret the guidelines.

Another problem area affected ethnic minorities, the conference heard. More vocational courses are needed for unskilled people who speak English as a second language, and also for those who are already skilled but whose English is poor.

Job hopes worsen for graduates

There was a "marked deterioration" in employment for Aberdeen University graduates last year compared with 1979, and worsen figures are predicted for this summer's output. This is the conclusion of a review by the university's careers and appointments service.

Poly directors fall into line

by Paul Flather

Polytechnic directors are urging the Government to end the "damaging uncertainty" surrounding its leaked plans to create a new national body to fund and control higher education in the public sector.

More directors have fallen into line behind the plans for a national body, arguing that there is now no time to lose, and to paraphrase the leaked Government memorandum, such a body is "the only way to safeguard excellence" by reasoned decisions.

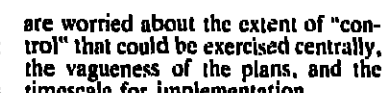
At the annual conference of the Committee of Directors of Polytechnics held last week at Wentworth Woodhouse near Rotherham, directors agreed two major policy papers on the national body and their own idea for a new system of unit cost funding.

About half of the 30 directors have always backed the national body plans since February. The CDP has now sent a formal paper to Mr Carlisle, Secretary of State for Education, asking to press on with his plans, but with three qualifications.

First directors want more emphasis on local authority involvement. They have agreed that a substantial number of places on polytechnic governing bodies will continue to be reserved for local authority representatives. At present polytechnics allocate one-third of their places for this purpose.

Dr Ray Rickett, chairman of the CDP, said this local authority input would ensure that polytechnics continued to respond to local industrial needs. Second, directors want funding arrangements to be based on student volume linked to three major categories of courses, and paid directly to institutions. The Government memorandum remained vague on funding mechanisms.

Third, directors are concerned about the degree of uncertainty, and the possibility of a "messy interregnum" as the national body is introduced. They



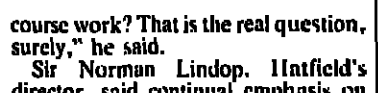
Dr Raymond Rickett (left) and Dr George Brosan

are worried about the extent of "control" that could be exercised centrally, the vagueness of the plans, and the timescale for implementation.

Dr William Birch, director of Bristol, and new deputy chairman of the CDP, said: "While we need a national body for long-term rationalizing, uncertainties and delays would be very damaging in the short-term."

Although a national body has always been on the top of the CDP shopping list, support for the Government plan is generally more cautious than optimistic. One director said "from the pragmatic point of view such a body is now inevitable." But he was worried about divisiveness between local authorities and institutions.

Among directors with differing views, Dr George Tolley, principal of Sheffield, still regards himself as an agnostic. He wonders what will happen after the funding mechanism has changed. "What will happen to local needs, or the level of resources, or



Dr Raymond Rickett (left) and Dr George Brosan

course work? That is the real question, surely," he said.

Sir Norman Lindop, Hatfield's director, said continual emphasis on degree work and full time equivalent would destroy the special character of polytechnics. Part-time and non-advanced work had to be given high priority, perhaps even equal priority.

Dr George Brosan, director of North East London Polytechnic, still supports "unmitigated regionalism", and is shortly to publish a paper arguing for regional bodies with strong local authority links, and against a national body.

The CDP paper argues that the new body would need to review the amount of money spent by institutions, and provide additional funds for non-advanced further education courses. It supports the Government proposal to create a committee of 20-25 people nominated by the Education Secretary for their experience in education, industry, commerce and the professions.

Funding plan linked to student numbers

Polytechnic directors have prepared their plan for a new system of unit cost funding, which they say is simpler, fairer, and more related to actual costs than a rival scheme prepared by the Department of Education and Science.

Both schemes have been submitted to members of a DES working group, chaired by Mr Stephen Jones, investigating ways of avoiding the financial confusion in polytechnics since the advanced further education pool was capped two years ago.

The pivot of the CDP scheme, produced by a committee chaired by Dr George Tolley, principal of Sheffield Polytechnic, is for funding to be linked to student numbers, courses, divided into three major categories according to their average costs.

The weighting of a unit would be by

reference to the cost of courses, levels of work, and modes of attendance. Science and technological courses would be high cost, at degree and postgraduate level, be worth 1.6 units; languages and education would be medium cost, worth 1.2 units; and arts and humanities would be low cost, worth 1 unit. Other advanced work would have relatively lower values.

The amount of money allocated to an institution would then be calculated by multiplying the student numbers in each course category, adding up the total units, and dividing the central sum according to the unit distribution.

This would provide about three quarters of the total income of an institution, with the rest coming from fee income. The directors say it is essential for polytechnics to be able to

fix their own fees for overseas students above a minimum like universities.

A major part of the DCDP scheme is the phased introduction of the changes over four years, so that only by 1985-86 will polytechnics receive all their funds according to weighted FTEs.

Dr Tolley said: "This three-tier system is related much more closely to the different costs of courses which in the end means a much fairer distribution of funds. It is phased and simpler than the DES scheme."

The DES scheme is based on arriving at national average costs for courses and penalising institutions who spend more than the average. Both schemes will now be examined in detail by the Stephen Jones group, before any final plan is agreed.

Unilateral disarmament tops university teachers' agenda

A call for unilateral disarmament in the face of the accelerating nuclear arms race is to vie with the cuts and salary negotiations as major issues at the summer council of the Association of University Teachers next month.

A move committing the union to campaign against Cruise missiles and join with university teachers' organisations in East and West to seek a nuclear-free zone in Europe will be discussed by delegates to the Cardiff council.

The programme of action would include affiliation to Scientists Against Nuclear Arms and involve lecturers in collecting information of use to the organisation.

At home, a university-based campaign for European Nuclear Disarmament culminating in a national day of action this summer is proposed in composite resolution embracing motions from seven local associations.

It calls on the Government to bar Cruise missiles from British soil, to reverse the decision to replace Polaris with the Trident system and to take immediate steps towards a policy of unilateral disarmament.

With no salary settlement until next April, the union has plenty of time to consider its strategy. The executive is seeking backing for building a comparability factor into the bargaining machinery and there are demands for single stage negotiations and restoration of the real salary levels set by the pseudo-Clegg settlement of October 1979.

Perhaps the key debate will be on a composite motion decrying the "destructive effect" the cuts are having on universities already finding their existing levels of finance inadequate.

It calls for an intensive campaign publicising the universities' value to the nation and their financial plight. Suggested sanctions include possible short and selective strikes and a Parliamentary campaign ending with a one-day lobby at Westminster. Cooperation with other campus unions is also sought.

A professional public relations firm should be engaged to fight the cause, according to the resolution, which deplores "distortions" being used by politicians defending the cuts.

£1m help for jobless youths

A three-pronged attack on the growing problem of youth unemployment is being mounted by the Inner London Education Authority at a cost of nearly £1m, half of which is to be given to colleges.

This initiative comes just as the annual flow of Easter school-leavers reaches the job market. Total vacancies in inner London careers offices are down to 750 compared with 5,000 last year.

The money will be spent in three main areas - improving aspects of the education service which help young people find jobs (eg, the careers service and school/industry links), encouraging youngsters to continue with studies, and helping unemployed youngsters benefit from the educational and training opportunities open to them.

The programme will use existing staff in schools, colleges, adult institutes and youth and careers services. Around £500,000 will be allocated to colleges for reorganising priorities, increasing provision of work preparation courses and for aid to low-achieving youngsters, and the handicapped.

Fears that exam changes will limit sixth formers

by Patricia Santinelli

All sixth formers should have access to higher education and not just those following traditional routes, the Council for National Academic Awards said in its response to Government proposals for new examinations for the 16-18 year age group.

The examinations, proposed in a Department of Education and Science consultative paper last October, consist of one 17-plus vocationally oriented exam and an intermediate level examination, worth roughly the equivalent of half an A level and limited to A level students.

The CNAA fears that the exams will divide sixth formers into categories: those who go on to higher education and those who do not.

"From our experience of seeing many non traditional sixth formers achieve success in higher education, we believe that no assumptions about potential educational achievement should be made at school age. Moreover any new system of examinations should enhance and not diminish later educational outcomes," the CNAA says.

On the intermediate level examination, the CNAA says that although the proposal offers limited additional breadth in the present specialization, it does not reduce specialization at the sixth form stage.

Overseas entry numbers drop

by Ngino Crequer

Applications from overseas students to British universities have fallen by more than a third, according to a report by the Universities Central Council of Admissions.

A huge drop in civil engineering applications of 27 per cent is reported from both home students (15 per cent fall) and overseas students (40 per cent fall). Architecture and town planning also show drops of 10 and 11 per cent, including home and overseas figures.

In March this year, 13,292 overseas students had applied for places at universities, compared with 20,538 the same time last year. There was an increase of 4 per cent in the number of applications from home students, with a continued rise in the proportion of women students.

The final total for all applications is expected to be 167,000 compared with 168,354 last year.

A break-down of the overseas figures shows that applications for music, sociology, economics, business management studies and combined biological sciences dropped by half.

Looking at total applications, there are increases in biological and physical sciences (19 per cent), geology (17 per cent), computing (12 per cent), government and public administration (11 per cent), mathematics (10 per cent) and others.

Media fails young people

Broadcasters are still failing to generate enough educational and general programme ideas as well as give air time for young people, according to a new report *Young People and Broadcasting* published this week.

The report by Peter Mundelson was commissioned by the British Youth Council and the Calouste Gulbenkian Foundation.

It recommends the setting up of a young adult unit within the National Extension College which would supplement programmes with material, telephone, telefilm, multi media contacts and follow up by non broadcast agencies. As a first step to such a unit a media officer has already started work at the college.

The Unit's funding would be drawn from the Manpower Services Commission and additional sources of finance, including commercial arrangements, to ensure that it is not restricted in scope. Youth based organizations would also be asked to contribute to the unit's work.

"The council points out that as an exclusively add-on solution to sixth form studies, proposals for I levels make no educational or administrative sense. What young people should be offered is the opportunity of an alternative but equally demanding broad based and properly planned programme of studies. It does not see why I levels should not be taken instead of A levels provided equivalence can be established and the exam is of a sufficient high intellectual standard."

"We do not believe in principle that a programme of study built on or around I levels could offer better preparation for higher education than a diet of A levels, particularly in the case when a pupil intends to read a degree course subject which does not depend on previous study in that area" the CNAA says.

Until a clear indication of the intellectual level of I levels is given, it will be impossible to assess relationship to higher education studies.

"Should this be established satisfactorily, however, the council will be willing to amend its general entrance requirements to allow for a combination of I and A levels. But there will still be a number of degree courses for which a minimum of two A levels will be required," the CNAA says.

Lecturer loses claim for promotion

by David Jobbins

A polytechnic did not penalize a trade union leader by failing to shortlist him for promotion, an industrial tribunal has decided.

The claim, by Mr Ray Grace, a member of the national executive of the National Association of Teachers in Further and Higher Education, was unanimously rejected by the tribunal after a five-day hearing.

He alleged that as the only candidate for the principal lecturer post of head of history of Newcastle Polytechnic, he would have got the job but for his work as a member of the executive and secretary of the union's northern region. The post was advertised and has since been filled.

But the tribunal rejected all complaints of penalisation and suggested that the case was a hopeless one, brought not with the expectation of recovering compensation but either out of spite to harass his employer or vaxationously for some other improper motive.

"This is a tragic case," the tribunal said in its reserved judgment. "It is a tragedy from (Mr Grace's) point of view because if his actions had been different in the summer of 1980, and more particularly if he had not had an attitude of distrust and sensitivity about his union commitments, he might well have had a bright future stretching before him in the teaching of history at this polytechnic."

"It is also a tragedy from (Newcastle City Council's) point of view because we consider they have been dragged through the tribunal on the flimsiest of pretexts."

The tribunal said Mr Grace had "allowed emotion to take the place of reason."

It added: "We can come to no other conclusion but that (Mr Grace) has vented his spite on the polytechnic for his failure to obtain the position as head of history by putting forward a case which, considered in the cold light of reason, has no foundation whatsoever."

His head of department, who had supported his application when the job was first advertised, later withdrew his backing, but the tribunal agreed this was not penalisation for trade union activity.

Mr Grace was "immersed" in his trade union activities, and the tribunal was told, was "sensitive" about them. "We think there is a strong case, on the balance of probabilities, that Mr Grace's enthusiasm and appetite for tasks outran (through lack of sufficient hours in the day) his ability to carry them all out fully."

Universities ask for new defence pact

from Clive Cookson

WASHINGTON

Smelling the gunpowder in the financial wind, a group of university presidents has asked Congress to give the Defense Department an additional \$4 billion to spend on basic research over the next 15 years.

For the first time since the 1960s, academic leaders appeared before the subcommittee on research and development of the House Armed Services Committee. Their lead witness, Rutgers University president, Edward Bloustein, said they wanted to establish "a new level of communication between Congress and the university community on defence-related research."

Dr Bloustein, who was backed by Richard Atkinson, chancellor of the University of California, San Diego, Robert Sproull, president of the University of Rochester, and John Wright, president of the University of Alabama, Huntsville, said the request for \$4 billion was based on an estimate by the Defense Department that it had underfunded basic research by that amount since 1965.

As a result of this underfunding "the university research base for defence preparedness is in some considerable danger," he said, warning that it "must be forcefully and promptly addressed if we are to provide for our common defence." As an example he gave America's current weakness in submarine warfare - "a direct result of a lack of basic research support in metallurgy and metal joining."

In fact the Pentagon has been trying for several years to support more academic research and restore its friendship with universities, which was almost destroyed by the antagonisms of the Vietnam war. The Carter administration encouraged the reconciliation and the budgets almost doubled the Defense Department's expenditure on academic science.

This year the Pentagon will spend \$528m on research in universities and colleges and, with the Reagan administration even more enthusiastic than its predecessor about boosting the military budget, the 1982 figure is likely to exceed \$700m.

The Defense Department officials who have been touring campuses - offering support for basic research in

metallurgy, materials science, electronics, computers, optics, climatology and many other fields - have generally had a favourable reception. With the budget of the National Science Foundation, the federal agency primarily responsible for academic science, under pressure, professors naturally welcome the appearance of an alternative source of research funds.

But the Pentagon has not had an unqualified welcome. A few old-style leftists and pacifists still object morally to receiving any funds from a military agency, even if they come in the form of support for basic research with no obvious applications to weapons technology. More importantly, some university administrators are becoming concerned that over-reliance on the Defense Department could jeopardize the free flow of scientific information.

The presidents of five major universities have written a joint letter to the secretaries of state, defence and commerce, complaining about recent attempts by the Defense Department to apply sweeping rules known as the International Traffic in Arms Regulations and the Export Administration Regulations to university teaching and research. These regulations give the government broad authority to restrict the "export" of unclassified technical data that could have military significance or applications.

In their letter, the presidents of Stanford University, California Institute of Technology, Massachusetts Institute of Technology, Cornell University and the University of California note that, although the regulations have existed for several years, they had not previously affected traditional university activities. But they say a new interpretation "appears to contemplate government restrictions of research publications and of discussion among scholars, as well as discrimination based on nationality, on the employment of faculty, and the admission of students and visiting scholars."

"In the broad scientific and technical area defined in the regulations, faculty could not conduct classroom lectures when foreign students were present, engage in the exchange of information with foreign visitors, present papers or participate in discussions at symposia and conferences where foreign nations were present, employ foreign nationals to work in their laboratories, or publish research findings in the



The Pentagon has been trying to support research

open literature," the university leaders warn. "Nor could universities, in effect, admit foreign nationals to graduate studies in those areas. Such restrictions would conflict with the fundamental precepts that define the role and operation of this nation's universities."

What most worried presidents Donald Kennedy, Marvin Goldberger, Paul Gray, Frank Rhodes and David Saxon was a memorandum which the Defense Department's Very High Speed Integrated Circuit programme office sent out in December to universities doing unclassified research in the field, the heart of computer technology. The memo said that advances in design and fabrication techniques, process equipment and software would be subject to the International Traffic in Arms Regulations and could not normally be published or divulged to foreigners. On the other hand, general basic research in integrated circuits would be exempt from the controls.

The university leaders rejected the government's idea that it could differentiate between the two categories. "There is no such easy separation in any engineering curriculum intended to be relevant to our national industrial needs and problems," they wrote. "Furthermore, producing graduates with no hands-on experience in these areas would be of little value to American high technology industries."

Rather than the messy use of export restrictions - a sort of "semi-classification," as MIT provost Francis Low put it - universities would prefer the Defense Department to rely on its own classified laboratories "to do the most sensitive segments of the VHSIC programme." They said that these restrictive and virtually unenforceable regulations to universities. For those university activities which remain unclassified, we urge the gov-

ernment to cease all attempts to apply the restrictions until the broader issues are resolved."

The five university presidents sent their protest letter discreetly to the three cabinet secretaries, and it was leaked to the press against their wishes; not released by them. That is because they do not want to kick up a big public row that might endanger the flow of defence dollars into the universities.

Although a few academic administrators see the ITAR dispute as a warning against seeking more research support from the Pentagon, most point out that the two issues are not directly related. The Defense Department is allowed to invoke the regulations to prevent the disclosure of any sensitive technical data to foreigners.

"In fact the history of research support by the Department of Defense has on the whole been a very good one," said MIT provost Low. "I am not worried about the Defense Department's support of basic research per se."

Many of the current generation of university leaders started their academic careers after the war, when the NSF did not exist and the Defense Department was virtually the only federal agency supporting basic research. They retain happy memories of the generous grants disbursed by the navy in particular, for a wide range of non-military projects - grants that, as Dr Low put it, "supported the real flowering of research in the United States."

Therefore President Bloustein of Rutgers had the general support of the academic establishment when he called for the \$4 billion boost in the Pentagon's basic research budget. In addition, he told the House subcommittee that the Department of Defense should establish a research equipment and facilities budget of \$180m a year.

New York to inspect foreign medical schools

by our North American editor

New York is going ahead with a controversial plan to evaluate foreign medical schools that send students to teaching hospitals in the state in clinical training.

The New York board of regents, which approved the plan by 16 votes, will be the first official accrediting body in the United States to inspect medical schools overseas. The system is aimed primarily at a dozen or so institutions in the Caribbean and Mexico, which have been set up in recent years to cater to the thousands of young Americans - including many New Yorkers - who cannot gain admittance to a medical school in their own country.

American medical schools lobbied hard against the proposal. Their spokesmen argued that state education officials could not properly evaluate thousands of miles away. They said the effect would be to give the regents' seal of approval to substandard institutions which would use it to add prestige to attract more American students at a time when the United States is facing an oversupply of medical graduates.

Under the New York scheme, a foreign medical school seeking approval must first send in written information about its curriculum, faculty and facilities, according to guidelines adopted by the regents. The state education department will choose a team "experienced in medical school evaluation" to assess the written materials and then visit the campus to inspect it for themselves. All costs will be paid by the school seeking approval. The evaluation fee is likely to be \$21,000.

Once approved, foreign institutions will be allowed to set up clinical training programmes for their American students at one or more of the 60 designated teaching hospitals in New York. Those hospitals are independent of the 13 medical schools in the state but have residency (clerkship) programmes accredited by the accreditation council on graduate medical education.

Justifying the scheme, the state education department said it was "designed to assure that students who enter clerkships in New York State hospitals have the competence to do the job."

Mr Katz was convicted of chaining university rector Professor Rafael Nechouian's office, of calling dean of students Professor Lina Ben-Dor a "liar" and of shouting at her "shut your mouth" and of pushing university spokesman Benny Nushkin.

Dr Schiffman rejected Mr Katz's argument that he was simply fulfilling his role as student union chairman when he led the demonstration, which was ostensibly to protest the university's intention to extend studies one

Overseas news

Hopes rise for black students

from Martin Feinstein

JOHANNESBURG

The number of black students at the Johannesburg College of Education could rise dramatically next year if negotiations between the university of the Witwatersrand and the Transvaal Education Department are successful.

Educationalists are hoping that the department will take a decision soon on application to open more courses to blacks made in January last year. Witwatersrand currently has about 350 education students at the college, but only three are black - two Indians and one coloured.

The university has asked the Transvaal's director of education, Professor J.H. Jooste, for permission to admit its black students to another four diploma courses at the college.

If successful, this slight relaxation of academic apartheid is likely to be welcomed by black educationalists. The college's three black students, all first years, are studying for their Bachelor of Primary Education degrees.

At the moment this is the only course at the college open to blacks in terms of an exemption from a 1953 "whites only" ordinance.

Witwatersrand has asked Prof Jooste to extend the exemption to include diploma courses in physical education, industrial arts, home economics and physical science.

Although the college is not directly involved in the negotiations, its rector, Professor A.N. Boyce, has been approached by Prof Jooste for his views. Prof Boyce has already canvassed staff and students for their reaction to the admission of more black students.

They had filled in anonymous questionnaires, and although these have not yet been processed, he felt most would favour the idea. His efforts have prompted speculation that the department will soon take a decision on the university's application.

However, even if it is successful, black students will still have to obtain ministerial permission to study at a "white" institution.

The registrar of Witwatersrand, Mr Ken Staudenmacher, said he had received "no further communication"



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Union leader faces expulsion

from Benny Morris

JERUSALEM

The Hebrew University's disciplinary board last week convicted student union chairman Yisrael Katz on charges brought against him in connection with the demonstration he led on March 19 at the rector's offices on Mount Scopus.

The sentence, by university head of discipline Dr Pinhas Schiffman, will be delivered next week according to very reliable sources. Mr Katz will be expelled from university for one year unless he apologizes publicly and in writing for his actions during the demonstration in which case the one year expulsion will be left as a suspended sentence.

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India sets up business link

BOMBAY

India's University Grants Commission (UGC) is to involve business and industrial enterprises in higher education in a move to enhance graduate job prospects.

The UGC has so far confined itself to dispensing funds to India's 100 odd universities and to somewhat laxly monitoring their performance. The UGC chairman, Mrs Madhuri Saah, is launching a branch of the new effort to link learning and work, something which Mrs Saah, as vice-chancellor of India's only women's university and a former head of Bombay's civil schools programme, is particularly interested in.

Mrs Saah said that if a university offered a degree course in automobile engineering, then the UGC would help it get automobile industries to play a big role in devising the course. She also promised to light up UGC supervisory cells at the UGC headquarters in New Delhi to which individual cells in each university will be answerable.

State lottery shuts out young hopefuls

from Lionel Cohen

NIMEGEN

University opposition to replacing Holland's long established lottery system for places in over-subscribed courses, means that, once again, many Dutch students will this year be shut out of their chosen study programmes.

Provisional figures for 1981/82 enrolments reveal major changes in the popularity rating of different subjects. Whereas last year all these studies were in the pure and applied sciences - notably medicine, dentistry, pharmacy, biology and veterinary science - this year law, industrial design and linguistic studies appear for the first time in the Academic Council's recommendations for lotting.

A dramatic decline in the number of university student applications has also been recorded. One result is that the shortage of places in the more popular subjects, such as medicine, which at one time attracted around five times as many applicants as places available, now amounts to an undersupply of less than 2,000 places for this year's 1981/82 intake. This means that quite a few of these spring students may find themselves in the under-subscribed medical faculties of many Belgian universities.

Arab women lobby for co-educational facilities

by Maureen Abdallah

This year the first batch of 370 students will graduate from Al Ain University in the United Arab Emirates (UAE). It is a time for celebration, but like any infant taking its first steps, the four year old Al Ain has been taking its ups and downs.

It is the UAE's first venture into tertiary education and was designed to fill an important gap in the rapidly developing system. Thanks to its presence hundreds of school leavers, who might otherwise have been denied access to higher education by parents who refused to sanction overseas study, now have a chance to obtain a degree.

In seven faculties - arts, science, administration and politics, education, Islamic studies, engineering and agriculture - are tailored to meet the needs of the region in terms of professional manpower. Several more are planned, including a department of nuclear physics and possibly a college of medicine.

The present 2,800 students have been handsomely wooed with free tuition and accommodation (including gourmet meals), free educational materials and even weekly pocket money. By civil service law all are guaranteed upon graduation. In theory they should all be very happy, but many are not, especially the female contingent.

In planning the university the authorities had to make provision for separate male and female campuses so as not to offend traditionalists in any way. This is something which has played a vital role in allowing for the present 43 per cent female enrolment, but it is something which the women themselves do not appreciate. They are already lobbying for co-educational facilities and are quite outspoken in their criticism of the university as a whole.

Acknowledged by the professors as excellent students, they express disappointment over the standard of education they are receiving. Some describe it as little better than high school, with too much emphasis on memorizing and theory. They insist they should be given more practical assignments and more access to the community, which, they are quick to point out, is not against the teachings of Islam. As it is their lives are strictly

regulated between hall of residence, campus and back again.

Another bone of contention is their limited career opportunities. Traditionally teaching is the main profession open to women - probably one of the main reasons Al Ain women turn to education as a last resort. Though the situation is improving, they are still discouraged from pursuing certain jobs. Many try to study administration, politics, even engineering and agriculture, but are turned away.

"What is the point of teaching them something they won't be able to use?" asks one professor.

The men have it much easier. They are free to come and go as they please and have more choice in terms of subject. Many treat their studies as secondary to driving fast cars and playing with electronic equipment, which frustrates the hard working women even more. But even they are beginning to feel their feet. In recent months the male campus was polarized between those in favour of a student union and those against. The "ayes" won but according to a professor, they are still not sure what to do with their newfound strength.

The professors themselves are not too happy either. There are around 200 of them, mainly either Arabs, on contract or by agreement between their governments. They admit that in material terms their situation is attractive, but they too feel cut off from society - by nature somewhat closed and conservative. In theory the faculty should be participating in research and development projects in the area, in practice, they find their efforts resented as interference.

Many are required to repeat the same courses on the two campuses. They have found the overall standard lower than what they are used to - admission is open to any UAE national with a high school certificate - but there is compensation in small classes and progress rapid among the students.

The university's prospects, however, are excellent, both in terms of its own development and the development of the region. "It is an investment," says Dean Qubaili from Iraq, "in creating a more demanding, more ambitious group which will help push the university and society forward." Meanwhile, the government has to get moving to create enough opportunities for that first group of graduates already breathing down its neck in search of the promised careers.

Italians close Somali culture gap

Few more appropriate contributions to the North-South dialogue have been made than the current efforts of a group of Roman linguists in Somalia.

Professor Francesco Agostini and his team from Rome University plan to publish by the end of next year a provisional dictionary of some 30,000 words with their Italian translations. This is almost four

times the number gathered by Professor Reinisch, whose 1982 Somali-German dictionary was the definitive study in this field. The team began work in 1977. It was greatly helped by the appearance in 1973 of the first works in written Somali using a Western alphabet as part of the government's efforts to end Somalia's cultural dependence on Arabic.

faculty of law was recently required to enroll an extra 200 students over and above the number which the faculty claimed they could accept. According to Professor Prakke, professor of Dutch and comparative law, such a policy of overloading the faculty with first year students would be nothing short of "disastrous" for the students concerned and would constitute a major step backwards in the quality of the teaching.

There is little doubt that the faculty concerned will fight this decision. The outcome may depend as much upon the decision of students to finally enroll, as upon the views of academic administrators on their capacity to teach.

If the present government's plans for sharply increasing student registration and college fees and for wholesale cuts in student grants survive next month's general elections, it could well happen that many of these potentially surplus students may fail to materialize. They could quite conceivably decide instead, to opt out of the prospect of long years of university study with doubtful horizons at the end - not because the faculty of their first choice is overcrowded - but because they can no longer afford what it would cost.

Carnegie report puts forward the general idea

General education, the most distinctive part of the American undergraduate programme, is in the early stages of a national revival. Most colleges and universities are making efforts to improve general education, which is frequently an academic disaster area, but they are hampered by confusion and lack of agreement about its purpose.

In an attempt to help higher education sort out its ideas, the Carnegie Foundation for the Advancement of Teaching has released a report, entitled *A Quest for Common Learning*, which offers a new six-point approach to enable students "to understand themselves, their society and the world in which they live."

The foundation's president, Ernest Boyer, who wrote the report with a Carnegie senior fellow Arthur Levine, is a long-standing advocate of general education. "I began to be seriously interested when I became dean of a small liberal arts college in California (Opland College) back in 1956," he said in an interview. "I was appalled at the carelessness of thinking and the self-serving nature of the debate over the curriculum there."

General education is therefore an appropriate topic for this, the first study to be published by the Carnegie Foundation under Dr Boyer's leadership. It was launched at a "Colloquium on common learning" at the University of Chicago last week.

Two of the three traditional parts of the American undergraduate programme, the "major" (the student's field of concentration) and "electives" (courses he or she chooses from other areas), have clear purposes. Boyer and



Mr Boyer: "appalled at carelessness" Levine argue. But both means and ends are confused in the third part, general education.

"General education, the spare room in the curriculum, is the easiest place to dump those concerns which everyone agrees are serious but for which no one seems to take responsibility," the report says.

Boyer and Levine believe the "missing ingredient has been a sharply defined and clearly stated purpose. Here is the one they offer: "General education should concern itself with those shared experiences without which human relationships are diminished, common bonds are weakened, and the quality of life is reduced. It should focus on our areas of interdependence, as members of the

human family and of a specific society. In short, it should concentrate on those experiences that knit isolated individuals into a community."

The six specific subject areas recommended in the report are:

- Shared use of symbols. Boyer and Levine say "Communications skills, as important as they are, are not enough. All students should understand how language has evolved; how, through literature, feelings and ideas are conveyed; how numeracy is a symbol system, too, and how we communicate not only verbally but non-verbally through dance, music and the visual arts."

- Shared membership in groups and institutions. "The general education curriculum we have in mind would look at the origins of institutions; how they evolve, grow strong, become oppressive or weak; and sometimes die."

- Shared producing and consuming. "We propose a general education programme that explores the significance of work in the lives of individuals and examines how work patterns reflect the values and shape the social climate of a culture. Such a curriculum would ask: What have been the historical, philosophical, religious and social attitudes to work around the world?"

- Shared relationships with nature. "No education is complete without an understanding of the ordered nature of the universe."

- Shared sense of time. "We propose a study of our common heritage (that would focus on the seminal ideas and events that have decisively shaped the course of history. More than a collection of facts, this approach would emphasize the convergence of social,

religious, political, economic and intellectual forces."

- Shared values and beliefs. "We suggest that, through general education, all students examine the distinctions we make between beliefs and 'facts', and how values are formed, transmitted and revised. They should examine too the values currently held in our society, looking at the ways such values are socially enforced, and how societies react to unpopular beliefs. General education should introduce all students to the powerful role political ideologies, and particularly religion, have played in shaping, throughout history, the convictions of individuals and societies."

Dr Boyer, former U.S. commissioner of education and chancellor of the State University of New York, conceded that the revitalization of general education is "a home-grown American issue that might not immediately find a receptive audience elsewhere."

A particular problem in the United States, Dr Boyer said, is that "in recent years, as general education requirements were abandoned by higher education, such requirements were also abandoned in the schools."

As an experiment, the Carnegie Foundation commissioned a public television station to make a one-hour film about general education, based on the colloquium on common learning in Chicago. It will be shown at academic meetings and on campuses around the United States, Dr Boyer said, in the expectation that a film would stimulate discussion better than a written report.

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Benny Morris looks at political activity on Israeli campuses

A battle for the 'thinking' voter

Israel goes to the polls on June 30 in general elections which many observers regard as the most important in the state's 33-year history. At stake, commentators and most "men in the street", is the country's political destiny, shaped by its relations with neighbouring Arab states, with the Palestinian Arabs of the occupied West Bank and Gaza Strip and with the West, as well as the state's demographic composition and social and economic character.

As never before, the universities are major political battlefields. Israel's six universities and the postgraduate Weizmann Institute of Science with a total of 55,000-60,000 students and 7,000 teachers account in voting power for three to four members in the 120-seat Knesset (Parliament), which is elected every four years by proportional representation. The university community has a tradition of close to 100 per cent turnout in national polls.

But the parties are looking beyond mere numbers in their efforts to gain campus votes. "The students and academics are regarded as an elite. Each party wants to be able to claim that the universities are voting for it as a means of enhancing party image and appeal," says Haim Ramon, secretary of the opposition Labour Party's "young guard" and the man in charge of mobilizing university and young people's votes for Labour.

"We must avoid a situation in which (the ruling) Likud (bloc) or (the ultra-nationalist) Tehiya Party can 'claim' the university vote", he warns.

But Ronnie Milo, Prime Minister Menachem Begin's 31-year-old son-in-law, a Likud MP and the bloc's campaign counterpart already feels able to make that claim. He argues that the Likud and its major component, the Herut Party have always done well among young people and that voting for the Likud in the Israel Defence Forces (IDF) has always been "disproportionately high".

The student unions in Israel's two largest universities, the Hebrew University (HU) and Tel Aviv University (TAU), and the National Union of Students have for years been controlled by Likud or Tehiya-affiliated activists while other ostensibly apolitical unions, like Haifa University, is chaired by a Herut Party member, and the union of the religious Bar-Ilan University is dominated by a coalition of Likud and National Religious Party supporters.

Mr. Milo, however, concedes that few students usually turn out for student union elections so that union control is not always or necessarily reflective of real campus political feeling.

Political activities on the campuses and student union elections have taken on greater importance this year. When the Likud and Tehiya-aligned Kassel faction won the student union elections at the Hebrew University in Jerusalem last year, Premier Begin invited the Kassel leaders to his office to congratulate them, and declared: "Here is proof that the country's youth are with us."

This year's Hebrew University student union election, scheduled for early June, just before the Knesset poll, is likely to serve as a tool of party propaganda in even more blatant fashion.

Mr. Ramon, who graduated TAU in law in the early 1970s, believes that the majority of Israel's students are pro-Labour "or at least not pro-Likud or pro-Tehiya". But for a variety of reasons, he argues, this has never come to bear in the student polls.

At TAU the problems traditionally have been "gerrymandering, fraud and student apathy", says Ramon. Election of representatives to the union council is by departments, with disproportionately low representation given to the large, and largely liberal or left-leaning humanities and social sciences. Unbroken Kassel control of the

TAU union and over its regulations have meant that the union election committees and overseers are all Kassel appointees.

In the February 1981 poll, the union agreed to allow a faculty representative, Professor Shlomo Simonsohn, to be election "overseer". He ruled that five of the 15 polling booths had been "fiddled". The union rejected his ruling. Prof. Simonsohn resigned and the university "neutralized" union activities and called for the disbandment of the union council, a new set of regulations formalizing university control of union finances and elections, and new elections.

NUS chairman, Tzahi Hanegbi, agrees that the union regulations at TAU and the HU, where he was student union chairman 1979/80, "favour the incumbents and can lead—have led—to electoral malpractice". But he insists that the majority of "politically aware" students are "pro-Kassel".

He cites the union election at the HU last June, in which over half the student body turned out, with Kassel, led by Yisrael Katz, picking up just over half the votes and, due to the constituency system, some 78 per cent of the union council seats.

Mr. Ramon contends that the situation at the HU is special. "The Jerusalem campus suffers from polarization over the Arab student problem," he says, referring to the HU's 500 Arab students (out of the university total of almost 15,000) who, in the past two years, have voted in a pro-PLO Progressive National Movement (PNM) leadership for the Arab Students Committee. The committee has repeatedly staged demonstrations on campus in support of the PLO and for an end to the Zionist state.

The average Israeli student who reaches the university, at the age of 20 or 21, after IDF service, is often married during undergraduate years, works at least half-time and has little time or inclination to devote to extracurricular pursuits.

Professor Zeev, a political scientist at HU, points to the tendency among what he calls "the best" Israeli youths to "shun politics" as a debasing, dirty business. "The cream of the youth over the past 25 years have gone into careers in the Israel Defence Forces (IDF), the universities, business, the sciences—but definitely not into politics or campus politics. They vote in national elections, certainly; but they won't otherwise sully their hands in the business."

Most students are unaware, or suspicious, of what, if anything, the student unions or the NUS, does or has done for them. But this past year the NUS and the HU union have turned extremely active and public in campaigning for better conditions for students. Not unattractively, some observers have connected this with the impending national vote and with the obvious desire of Mr. Hanegbi, who is also the unofficial leader of the Tehiya "young guard" and of Yisrael Katz, a Likud activist as well as HU student union chairman, to project themselves onto the national stage as aspiring national politicians.

Two months ago the NUS staged a one-day national strike, shutting down the universities, in a much-publicized effort to force the Treasury to raise the minimum student wage. And last month, Katz organized a demonstration and a one-day strike at the HU to obtain the repeal of a large increase in monthly dormitory fees. These efforts contrasted starkly with Mr. Hanegbi's and Mr. Katz's blatantly political activities in the previous two years.

Mr. Hanegbi foresees turbulent months ahead on the campuses. The national and student election campaigns, he predicts, will lead to a heightening of political tensions between Jews and encourage the Arab students, especially in Jerusalem, to renew their political activities in the hope of further polarizing the Jewish students. Last month a group of ultra-right-wing Jewish students attacked three Arabs in the Herut Technion dorms, and on the Technion Jewish student was killed. The events have given

This may be Labour's main problem in the elections. "We are trying to project an image of moderation and conciliation vis-à-vis the Palestinians while rejecting the PLO as a partner for negotiations, and opposing the establishment of a sovereign Palestinian state in the West Bank," he says. "Since the start of the campaign, the Likud has branded us pro-Palestinian, has charged that we are weak and has stressed that if we reach power we will engineer a sell-out to Arabist (PLO) chairman, allowing the creation of a PLO state in the occupied areas."

To counter this lumping of Labour with the extreme left and the Arabs on campus, the Labour faction at the HU has avoided united front or popular front tactics, in line with a secret 1979 directive from Hayarion Street, the Labour Party HQ in Tel Aviv. Mr. Ramon says that this may have alienated from Labour some left-leaning students.

The ultra-nationalist Yesh Yisrael She-lanu (Israel is Ours) faction publicly and support as the primary anti-Arab group.



Israeli Arabs can have little hope that the 1980 poll can bring a successful solution to the Palestinian problem without civil war.

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Ironically, Mr. Hanegbi himself will shortly part company with his erstwhile ally, Yisrael Katz, and will stump the country on behalf of the Tehiya, which favours immediate annexation of the West Bank, while Mr. Katz is expected to electioneer for the Likud, from which the two Tehiya MPs split in 1978 after Mr. Begin agreed to exchange the whole of Sinai for a peace treaty with Egypt.

If, after all, most of Israel's students vote liberal or left come June 30, it may be attributed at least in part to the fact that the teaching staffs at the universities are almost solidly liberal, pro-Labour or somewhat to the left of these.

MP Ronnie Milo says that while the Likud is strong among professional groups, such as lawyers and chartered accountants, it has very little following in the academic community.

"I can hardly name one colleague of mine who is a Likud or Tehiya supporter," says Prof. Sternhell, thinking of his political science department and, more widely, of the social sciences and liberal arts in general.

"The right traditionally has had almost no support among Israel's intelligentsia", he claims. (The Revisionist or Herut Party, the main component of the Likud bloc, traditionally has drawn its votes from Israel's poor and mostly poorly educated Sephardi or Oriental Jews as well as from the business community. Ironically, the only important academic figure identified with the right in recent decades in Prof. Sternhell's own former mentor, Hebrew University professor Emeritus Ben-Zion Dinur.)

The intellectuals and the universities, which, apart from the HU, came into existence since the establishment of the state, traditionally have been identified with the Labour Party, the broadly-based socialist alignment which headed all Israel's coalition governments between 1948 and 1977.

Before 1948, Jewish society in Palestine was highly politicized, and the level of ideological commitment and argument were extremely high. Intense ideological and sometimes violence was apt to break out over abstract, finer points of doctrine, and intellectuals were at the forefront of party political activity.

Following the establishment of the state in 1948, party machines began to dominate political life. The level of ideological commitment, purity and

argument dropped, and intellectuals were by and large shunted aside as the reins of power fell firmly into the hands of caucus apparatchiks and the grime of the state bureaucracies. In any case, academics, with teaching and research commitments, were ill-placed to compete with the daily demands of political infighting. Indeed, as politics became grayer, university graduates generally grew increasingly alienated from politics in general.

To be sure, Labour continued to use intellectuals as decorations for the party election list: Jewish history professor Ben-Zion Dinur became the country's first education minister and novelists and literature lecturers Sadan and Yishar Smilansky became MPs. But real rapport remained minimal.

The 1967 Six Day War set the seal on the alienation of the university community from the parties and government. In growing numbers, the academics led by such figures as the late Hebrew University historian J. L. Talmon came out openly and forcefully against the occupation of the Arab-populated West Bank and Gaza Strip and the alleged inflexibility of Israeli policies towards the Arab states. From the government perspective, between 1967 and 1973 Israel opted to be enjoying an unprecedented economic boom and unparalleled regional military ascendancy. A basic intellectualism seems to have characterized the self-taught Golda Meir, premier from 1969 to 1974.

The shock of the Yom Kippur War of October 1973, according to Prof. Sternhell, created a sense of insecurity and inadequacy in the cabinet, the ministries and the Labour Party. A number of practical academics were drawn into public service.

Under the Rabin government (1974-1977), Hebrew University politician and professor Shlomo Avineri served as Foreign Ministry director general (equivalent to PUS) international relations professor, Yehoshua Harkabi, a former general and director of military intelligence, was brought in as adviser on terrorism to the defence minister, and Hebrew University economist Professor Michael Bruno was appointed a senior adviser to the finance minister, a name a few of the senior appointments.

But for most talents and purposes, academics remained remote from the levers of political power. The US government at the time boasted a handful of academics turned cabinet level politicians including Henry Kissinger and James Schlesinger.

General disenchantment with Labour in early 1977 led to the formation of the Democratic Movement for Change (DMC), in which academics played a key role. The party, which aimed to be a decisive third force in the country's political life, was headed by Hebrew University archaeologist and historian Yigael Yadin and by TAU law school dean, Professor Amnon Rubinstein.

The Likud victory in the May 1977 elections was so great that the DMC, which won 15 seats, fell short of a decent winning enough votes to force coalition terms. With 45 seats, the Likud was able to take or leave the support after it had secured the votes of the two religious parties. The DMC subsequently dissolved and its party, has vanished from the scene.

The election provided a platform for many previously politically inactive academics, who supported the emergence in 1978 of the Peace Now Movement, which one evening in Tel Aviv, 1978 managed to field some 10,000 anti-Begin demonstrators, in the largest political rally ever witnessed in this country of less than four million.

With the signing of the Israel-Egypt peace treaty on the White House lawn in March 1979, the peace movement lost much of its urgency and impact. Though it remained sporadically active as the primary extra-parliamentary group opposing the Begin government's West Bank policies, the movement recently decided not to run for the Knesset and some of its leaders have joined party lists. Others expect the movement to continue work after the vote to continue urging with primary pressure group Bank in a "drawal" from the West Bank in exchange for a peace settlement with Palestinian inhabitants and with Jordan.

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Employers' liability

The ministerial memorandum detailing plans for centralised control of public sector higher education says almost nothing about implications for the thousands of lecturers and other staff who will be affected.

Preoccupied with the preliminary mechanics of acquiring bricks and mortar—more accurately concrete and sheet glass—and setting out the criteria on which institutions will be selected to come under the wing of the public sector's version of the University Grants Committee, it did not spell out how established methods of pay and conditions bargaining or existing relationships between employers and trade unions will be changed if it is implemented.

In the absence of any observations from the Department of Education and Science it has been left to administrators and trade union officials to speculate about these gaps. But it is clear that the dilution of power currently enjoyed by the local education authorities could have a profound effect on the present picture of industrial relations in the polytechnics and colleges and introduce new conflicts into what is a relatively stable situation.

The crucial change will be that staff of the 98 or so "hived off" institutions would cease to be employed by the local authorities. Instead they would become direct employees of their institutions, probably technically of their governing bodies.

This would fundamentally upset the existing arrangements for negotiating lecturers' pay and conditions, already under review by the Government. The Burnham committees have cast the local authorities in the role of employer.

New arrangements would have to be made, and as local bargaining would presumably be out of the question, a centralised method would have to be devised to facilitate a uniform national pay level.

The presence of the DES would probably be far stronger even than in the Burnham Committees, and one existing model would be the universities' system. There a provisional award is settled in negotiation between the union and representatives of the employers (the vice chancellors.) The two sides then join together to present a united front to the DES at a second stage.

But as Mr. John Bevan, director of education for the Inner London Education Authority, wrote some weeks ago "It is hard to convince oneself

Charlotte Barry on an adult literacy experiment

Many illiterate Welsh speakers find it a daunting prospect to join an adult literacy class based on English, their second language. So it is hardly surprising that a scheme launched in East Kent called "Word Line" showed the potential use of intensive publicity methods in a small area. Posters were put in village shops, pubs and garages; cards left in phone boxes, public lavatories and taxis; a door-to-door campaign produced excellent results.

The nationwide recruitment methods of the 1970s tended to attract mostly well-motivated men aged between 25 and 45 but not many young people, the book says. The Bristol ROSLA project for young people with truancy problems has proved a marked success in a short period. The Suffolk Association of Youth project has experimented with the use of young people tutoring others in their own homes.

Urban projects include the Newham Parents' Centre in a working class dockland area of East London. Staff in its shop on the busy High Street help mothers and fathers of children under five, those just learning to read or in remedial classes at school. Another scheme in the London Borough of Haringey produced a handbook for tutors dealing with the difficulties of teaching students of Caribbean origin who speak Creole English.

One of the most successful projects has been the Leeds reading and writing drop-in shop which is sandwiched between an antique dealer and a cut price toy shop in the city centre. It offers free reading and writing tuition to any passing adult. It is also much in demand for help with social security or

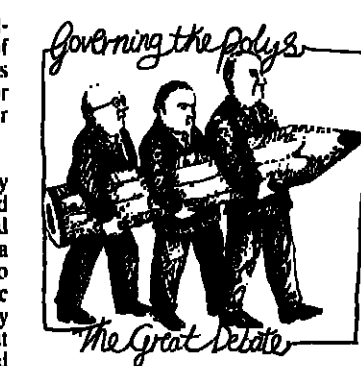
legal problems and form filling and letter writing. Work with ex-offenders has shown that they are reluctant to come forward for literacy tuition and are more likely to drop out. The Manchester project organised by the National Association for the Care and Resettlement of Offenders successfully mixed literacy tuition with leisure pursuits. Some of the voluntary tutors were ex-prisoners themselves.

The book emphasises that adult education and adult literacy are voluntary activities and that it is dangerous to begin thinking of basic education as a crusade. It highlights the importance of approaching adults in new ways and not repeating methods used for small children. It states that the students' own writing is as vital as the reading of what others have written.

It concludes that the average cost of the development projects at £7,000 a year marked real cost-effectiveness. But they relied on a tremendous amount of effort from project workers over long hours and with inadequate support.

Sponsorship from the unit was meant to act as a stimulus so i.e.a.s. could assume full responsibility at the end of the year. Sadly, the public spending cuts prevented this in some areas. For example, the successful New Horizons project in East Sussex was not continued by the authority, whereas the drop-in shop in Leeds continues, to thrive.

Development projects 1978-1980, price £1.25 from the Adult Literacy and Basic Skills Unit, Kingsbourne House, 22/23 High Holborn, London WC1V 7DA.



In our continuing series on the Government's plan for a national body David Jobbins looks at the implications for wage negotiating

that their industrial relations are, overall, to be commended."

Certainly the employers' side of the new negotiating body would be more vulnerable to Government pressure over pay levels.

It would lack the constitutional independence from direct ministerial interference normally enjoyed by the local authorities or the hallowed autonomy of the universities. In practice neither has been particularly effective at resisting Government attempts to impose non-statutory pay policies, but public sector higher education would be in an even weaker position.

Even the most appealing example—the governors' committee which determines pay for staff in the Scottish central institutions—is far from immune from the influence of Government officials who sit on it.

There appears to be a regrettable tendency in education to assume that a new educational structure demands a new trade union. The example closest to home was the foundation of the Association of Polytechnic Teachers.

The National Association of Teachers in Further and Higher Education, the main union with about 73,000 members in further and higher education, sees no reason why it should not continue to organize HE lecturers if the plans are implemented.

It reckons about 20,000 of its rule-of-thumb estimate of 24,000 members in higher education are in polytechnics

and colleges which would be under the umbrella of the new body. It would resist with all the resources at its disposal attempts by other unions to poach its members. While the Bridlington agreements would preclude poaching by other TUC unions, the rival Association of Polytechnic Teachers, which is not affiliated to the TUC, would however be free to step up its recruiting activities.

Its major claim has always been that Natthe cannot represent the polytechnics adequately because of its preponderance of FE teacher members. A separate negotiating forum might give an added drive to this campaign, and APT might be successful in pricing Natthe members away from the major union.

To counter this threat, Natthe would be likely to adapt its own internal procedures to give staff at the newly centralised institutions a greater influence on their own pay and conditions. Union leaders point to the examples set by other white collar unions who hold sectional conferences for their members who work in distinct bargaining areas.

A special conference for Natthe staff in the 98 polytechnics and colleges would allow their aims to be determined separately from those of members who are still involved in negotiations with the local authorities.

APT is continuing to press strongly for a fully-independent voice for the polytechnics. In its submission to the review of the Burnham structure, it suggests at the very least separate negotiations within the further education committee.

Both unions have recognised the advantages of close informal links, although there is some hesitation whether the process should go further. Implementation of the plan would certainly lead to closer comparison of salaries and conditions in the two sectors—bringing to an end the confusion reigning in this area.

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Ironically, central to the issue of implementation, all this activity comes at a time (some would say too late) when both the primary and secondary sectors are confronting serious difficulties in maintaining existing curricular provision as a result of Government expenditure cuts. These have already led to the disappearance of some minority subjects as a recent HMI report showed only too clearly.

Indeed it was made clear at the Schools Council convention last week that unless extra resources were provided by local education authorities and the Government both documents' well-intended ambitions would founder and remain merely hypocritical contributions.

It has been suggested that one of the main reasons why an earlier version, *A Framework for the School Curriculum*, which advocated set minimum periods for maths, English, science and modern languages up to the age of 16, did not become the final version was not only because it was found unacceptable by a majority of interested parties, but because its implementation would have required extra resources.

In this latest version the DES stresses that its recommended approach must be achieved within existing resources and within the constraints of shortages of specialist teachers as well as financial restraints. But it hopes that in spite of these difficulties the education service will take a long term view and give priority to the objective of an effective curriculum.

Although the document contains nothing sensational new, partly because it is based on previously published surveys and partly because its recommendations are very much what is already covered by schools, it is the first time since 1944 that the Government has set down "its firm views" on what schools should be teaching. It intends to follow up the paper with a

The core of the DES's curriculum problem

A veritable battery of documents on the curriculum has been unleashed on the education service since the Great Debate was first launched by then Prime Minister James Callaghan at Oxford in 1976.

This deluge of documentation whether in the form of HMI reports, surveys, Department of Education and Science circulars, consultative and recommended versions of the curriculum have contrived to plead for improvements, criticize existing provision and suggest new versions of the curriculum.

What their effect has been, apart from demoralising some of the teaching profession is as yet an uncharted sea but they have led to discussion of the whole curriculum, the common curriculum, a core, a framework and on controlling and regenerating the curriculum.

These efforts have now culminated in the publication last month of the "final" Government recommended version in the shape of the "School Curriculum" document which attempts to please "all men" and a seemingly unwittingly complementary contribution from the Schools Council in the form of the "Practical Curriculum" published last week.

Both documents advocate that pupils should receive a broad and largely common curriculum up to the age of 16 and that this should be related to real life and society. But the first is a recommended approach to what the school curriculum should be, while the second is intended as a blueprint to help teachers meet the curriculum needs of individual pupils.

Their different emphasis is highlighted by statements contained in their introduction. "The school curriculum is at the heart of education" says the DES. "The heart of the matter is what each child takes away from school," the Schools Council stresses.

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review to local authorities and a review in two years time. Previous plans for minimums of maths, science, English and modern languages have been dropped. Instead the paper says that pupils should not be allowed to drop vital subjects at the end of the third year of secondary school. It stresses that although Ministers have a responsibility for what is taught, the onus is firmly on the schools, and that provided they produce a balanced coherent programme, they can look to further and higher education to supplement those elements which they have not been able to include.

Within these parameters, the paper says that a broad curriculum should ensure that there are substantial common elements including maths, English, science, religion, physical education and art for all up to the age of 16. At primary level, the paper states that it is essential to teach reading, writing and calculating since deficiencies in these basic areas can only be a handicap later. But it emphasizes that schools must provide a wide range of experience as there is no evidence that a narrow curriculum, concentrating only on basic skills enables children to do better at these.

At the secondary level, it says that all pupils between 11 and 16 should be provided with a broad and balanced education which does not restrict subsequent choices and ensure that they are fully equipped for adult and working life.

Added to the key elements already mentioned is the study of humanities and a recommended selection of modern languages and continue to do so through the whole four year period.

The study of the latter and science are heavily emphasized on section on specific subjects within the curriculum. Both subjects, the document says, need greater and fuller inquiry. Indeed in science this has already begun with an announcement last week from the Schools Council that it was undertaking a major five year review in the science curriculum together with the Association of Science Education at a cost of £500,000.

In its paper the DES says that pupils must continue with the three main sciences in the fourth and fifth years and that new science courses which enable three sciences to be studied without increasing the subjects share of the timetable are needed.

On modern language the paper points out that although 80 per cent of young people studied a foreign language compared with 30 per cent 20 years ago, the percentage completing four-year courses had not increased. To remedy this most pupils should be given the opportunity to learn a foreign language and two and possibly three years of study should be the minimum. Local authorities should plan across their area to ensure that a healthy balance of different language is available for study.

Among some of the important

Events

CONTINUING EXHIBITIONS
Until April 20. Crawford Centre for the Arts, University of St Andrews. *Observers of Man: photographs taken by explorers and anthropologists.*
Until April 26. British Library, London. *George Eliot 1819-1880.*
Until September 2. British Library, London. *Animals in Persian, Turkish and Mughal Art.*

EVENTS

Until May 2. Octagon Theatre, Bolton. *The Wolf by Ferenc Molnar (Hungary), part of an international theatre season.*
Saturday April 18. Arts Centre, University of Stirling. *Czechmate* presented by the Alva Academy Company.
Saturday 25 and Sunday April 26. Crewe and Alsager College of Higher Education. Conference: *Physical and Visual Theatre.*

Thursday April 30. Crewe and Alsager College of Higher Education. Illustrated talk by Ian Purchase: *The Photographic Conscience. Documentary photography and social conditions in America.*

Saturday May 2. The Dome, Brighton. Concert: *The Moscow Philharmonic Orchestra, conductor Dimitri Klitanko, piano Vladimir Kravtsov, play works by Rimsky-Korsakov, Prokofiev and Tchaikovsky.*

Saturday May 2. Great Hall, Goldsmiths' College, London. The NCOs Orchestra, conductor Vernon Hoadley, play works by Williamson, Walton and Vaughan Williams.

From Tuesday May 5 until Saturday May 30. Octagon Theatre, Bolton. *Tango by Slawomir Mrozek (Poland), translated by Nicholas Bethell and adapted by Tom Stoppard.*

Thursday May 7 to Saturday May 9. Voughton Centre Theatre, Milton Keynes. *The Hull Truck Theatre Company present Peter Tinswood's The Day War Broke Out.*

Saturday May 9. Hagley Hall, Stourbridge. English Concert Group play music of the Seventeenth and Eighteenth Centuries.

Sunday May 10. The Dome, Brighton. The Concertgebouw Orchestra, conducted by Bernard Haitink, play Bruckner's Symphony No 8.

Saturday May 16. Great Hall, Goldsmiths' College, Goldsmiths' Choir and Symphony Orchestra, conductor Arthur Davison.

Saturday May 16. Warwick Castle, London Early Music Group.



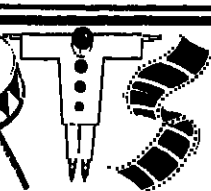
Lapland - Snow caught in grille, one of Harold Elvin's paintings on show at the University of London Institute of Education Arts Centre from next Thursday to May 14.



Some of the most futuristic of technology is being used at the Victoria and Albert to shed light, quite literally, on the past.

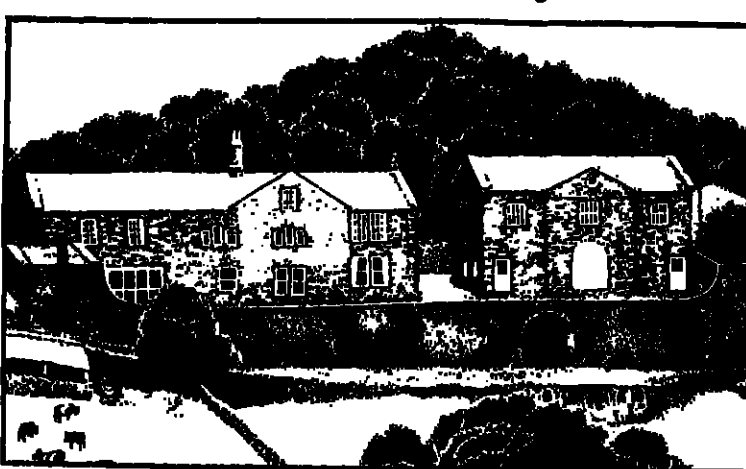
The V and A's Theatre Museum opened its doors this month to an exhibition of historic ballet costumes, for which designer J. L. Paterson has employed a microchip system to control the lights and music, with an inventive cross-fading technique that gives the impression of movement.

There are more than 70 costumes being shown, from the 18th Century Italian dress used in private court theatres, to the dance gown of the 1880s. There are three of Pavlova's dresses, and 14 from Diaghilev's Ballets Russes. Other famous names of this century who are represented are



One author's view of the value of Lumb Bank's creative writing courses

The Bank with a prized commodity



Lumb Bank: magical

There are those who are adamant that writers are born and not made; but it is a received wisdom which the Arvon Foundation is seeking to qualify through its two centres in Devon and Yorkshire.

The foundation is a registered charity which receives money from, among others, the Arts Council; five days at one of the centres, in the company of established writers, costs £65.

A typical week would see some 16 aspiring writers, from every conceivable background and age, showing their work to one of the "craftsmen" of the week.

There are 20 courses in the six-month season just started, with names as well known as Bragg, Barrow, Benedic, Thwaite, Fuller and Gens. Lumb Bank itself belongs to the poet Ted Hughes, and is now surrounded by the ruins of old mills. He is unequivocal about the value of the foundation's work: "The excitement and magical atmosphere of these courses, when they succeed - and nearly all of them seem to succeed - has to be experienced. This brief, extremely intense apprenticeship very often does more for the aspiring writer than many years of lonely search."

The first course of the present series was taken by novelist Ian McEwan and Nigel Williams, the first of whom is the author of *First Love, Last Rites, In Between the Sheets* and *The Cement Garden*. He has taught "creative writing" in America for three months, and shares much of that country's commitment to a "discipline" that remains suspect over here. His co-tutor at Lumb Bank was Nigel Williams (*My Life Closed Twice* and *Jack be Nimble*). After his week at Lumb Bank, he has this to say on the matter:

"The chief argument against Creative Writing (there are hardly any

courses on the subject taught at English universities) is that the writing of fiction is not a communicable skill, like driving or rock climbing (although there are those who would argue that all skills are learned rather than taught). It is interesting to note that some of those most opposed to the existence of the discipline are to be found among the teachers of something called English Literature.

"Indeed, these persons can be heard to exclaim that Creative Writing is clearly not a discipline at all, since, unlike the study of English Literature, it does not involve the memorising of dates and names or the accession to principles so long accepted by other practitioners in the field that they have graduated to the status of objective truths.

"The fact remains however that there are questions of the technical relations between a fiction writer's material and his or her handling of it, that are capable of being abstracted into a coherent system, worthy of study. The uses of tenses and moods, say, or the relevance or irrelevance of first or third person narrative, are not simply rules to be applied in order to vindicate those who are deemed worthy to part of the syllabus, but problems urgently requiring solution by those now engaged in writing, as opposed to the studying, of fiction. Perhaps what frightens these critics are the anarchic implications of studying the effectiveness of metaphor or the dangers of simile, not in relation to a previously accepted notion of what is correct, but in relation to an individual's desire to express his or her experience. For it is most perfectly in the teaching of Creative Writing that student and pupil are able to discuss what is often the most interesting subject in any classroom - the love affairs, quarrels, successes, or simply gossip that happens outside it."

Part of the display takes the form of a tribute to the Royal Ballet, which is 50 years old this year. A book of the exhibition, *Designing for the Dancers*, has been produced, with contributions from Roy Strong, Ivor Guest and Richard Buckle.

Our picture shows, from left to right: an Henri de Clugy costume for a dancer in a ballet de cour from between 1660 and 1670; an 1831 lithograph of Marie Taglioni as Flora from Didelot's ballet *Flora et Zephire*; Nijinsky's 1912 ballet costume for *La Dieu Bleue*; Diaghilev's 1912 ballet costume for *La Diva*; and a costume for the 1912 ballet *La Diva*, designed by Andy Klunder for Kenneth Macmillan's 1960 work for the Royal Ballet.

The two have also collaborated on a related one-day conference at the university on May 8 in the Carmel College Lecture Theatre.

The exhibition includes some 170 black and white photos, with explanatory captions, arranged in four sections: painting, architecture and town planning, graphics and cinema. The photos of the two countries are compared side by side to make comparisons easier.

Finally, Len Riefenstahl's film, *The Triumph of the Will*, to be screened at the Media Service Unit. This is a documentary illustrating the propaganda function of Fascist and Nazi public personae.

Whatever lasting changes in the lot of the disabled are or not achieved this year, at least the Graeco Company has found itself a permanent home. The Graeco, you may remember from earlier pages of the *THES*, was formed

No, but I've seen the lecture

A 55-minute film that started life as part of a media studies course is now being studied by the media. Last month critics found themselves attending a press showing of the very uncommercial-sounding *Critical Mass*. The title refers not to a creature from John Windham's imagination, but to the hazards of nuclear development. As for the credits, they belong to "the personnel of Edinburgh College of Art Audio Visual Services and Heriot-Watt University Television Centre."

The film is a colour video recording based on two meetings held in Edinburgh last October by Dr Helen Caldicott, chairwoman of Physicians for Social Responsibility and winner of the 1980 Ghandi Peace Prize.

There seems to have been an element of MacLachlanism about the whole production, one purpose being to test the notion that the way a programme looks, rather than what it has to say, is the main criterion for measuring its success. In any event, the production team has come up with a highly professional product, and, equally importantly, a "star" (in the sense that a Bellamy or an Dr Caldicott).

In the best traditions of the committed lecturer she takes us lucidly through each stage of the nuclear fuel cycle: uranium mining, its enrichment in electricity-generating power stations, the extraction of plutonium from the reactors, and finally its use in nuclear warheads.

Among a stream of unpalatable facts Dr Caldicott notes that between 20 and 60 per cent of uranium miners for the weapons industry in America are now dying of lung cancer. In the two months since its completion the film has been seen by a number of groups. Any proceeds from the showings will be ploughed back into more collaborations of this kind between Heriot-Watt and Edinburgh College of Art.



Art and Propaganda in Fascist Italy and Nazi Germany is the title of an exhibition tracing the relationship between art and politics in those two countries. It opens on April 27 in the Scott Gallery at Lancaster University, and has been arranged by the departments of Italian and German studies.

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by Richard Tomlinson, the Open University's national adviser for the disabled. It was he who assembled a six-strong troupe with a range of disabilities from cerebral palsy to osteogenesis imperfecta, which then did a play all about the problems of integration. That play, *Sideshow*, was seen on BBC's *Arena* and at the Riverside Theatre. Their diary is now black with regional bookings. From the beginning of next month they will be based at the West End Centre, Aldershot. Potential actors, administrators, musicians and stage managers should contact Richard Tomlinson at 255 Brecknock Road, London N19 2BT (267 7693).

Meanwhile, at Bath University there is an exhibition by these young artists who are also severely handicapped. They come from Bath's Wiley Centre which provides short-term help for families with a disabled member. The organizer of the exhibition is art therapist John Morley. It is being held in the university's library and runs until next Friday.

Not before time London's fringe theatre is to get a magazine of its own. Until now it has been heavily dependent on the good, if sometimes tetchy offices of *Time Out*.

The number of fringe theatres in the capital now tops the 50 mark and despite the rough attentions of the Arts Council shows no imminent signs of dropping. On the contrary, the medium of the pub theatre is clearly enjoying a growth period, with brewers at last realizing the potential of their empty rooms as extra bar trade. The publication will be fortnightly, and edited by Paul Hines.

The bulk of the advertising revenue will come from the fringe house themselves and it is hoped that there will soon be enough space to run regular reviews and features.

Also making its debut this month is the *Scottish Theatre News*. There is a small difference: this one actually owes its life to the (Scottish) Arts Council, which has just given the publishers, the Scottish Society of Playwrights, a grant of £4,640.

The tireless Clive Wolfe has just been saddled, willingly no doubt, with a new job for the Bolton Festival - consultant and co-ordinator. He is well equipped, having run the Sunday Times National Student Drama Festival since 1968 through some good and bad times. This is only the second of Bolton's festivals, and this year it is to feature the life and work of the first Lord Leverhulme, who was born in the city. His grandson is president of the festival. Still, it would take more than this to prise Mr Wolfe from the NSF, whose fortunes have looked up, with some timely help from the British Petroleum Company.

Oxford Polytechnic has just embarked on a three-year project development education. What is development education?

According to the Poly, who should know, it is "the study of change in society, with particular reference to the Third World. In relation to the curriculum in the schools. The project leader is Mr Og Thomas, and sponsorship has come from Oxfordshire Oxfordshire Local Education Authority. The research unit is part of the poly's faculty of educational studies.

Of all academic creatures, the artist-in-residence must feel most threatened by murmured aspirations to cost-effectiveness. A St Andrews example of the species has been pre-emptively providing the basis of a "Sculpture Walk" in the town.

During his time as A-R at the university, which he has just completed, Eric Wilson worked on some sculptures intended "not for the gallery, but for the streets, buildings and elements."

The pieces on show include a "Hole of Troy" encapsulated in a high-heeled shoe, and "The Vicar's Daughter." Mr Wilson insists that when they walk, "almost hidden on the host buildings, becoming an entity with the town." The exhibition, which is concurrent with *Observers of Man*, ends on Monday.

Alan Francis

Igor Aleksander looks at cybernetics, the 'Esperanto' of the scientific world

Artoo-Detoo, See - Threepio and the mathematical explanations of living things

To most, the word "cybernetics" means something like "doing human-like things with computers" or "making robots". Indeed, during his early BBC adventures, Dr. Who found robot-like Cybermen almost as witty as the less humanoid but more enduring Daleks. In the mid sixties, an exhibition at the Institute of Contemporary Art was called "Cybernetics, this left visitors with a possible suspicion that cybernetics is a legitimate medium for a later-day Dr. Frankenstein and his humanoid creation.

So it is with some difficulty that one recalls that cybernetics is a discipline which arose from the discussions of a group of serious scientists who met to probe the foundations of the scientific method itself. As Norbert Wiener describes in his 1947 book, which was called *Cybernetics* and thus coined the new term the source of his vision came from his attendance at a series of multi-disciplinary seminars at the Harvard Medical School. These were organized by the neurophysiologist Arturo Rosenbluth in the late thirties, and addressed the question of whether the scientific method, particularly the use of mathematical modelling, could be used to explain phenomena in living things. Formal notions of "feedback" and "quantity of information" drawn from engineering appeared to be highly relevant and not previously applied to biology, physiology and even psychology.

Wiener conveys with colourful clarity the nature of his excitement: "Specialized fields are continually growing and invading new territory. The result is like what occurred when the Oregon country was being invaded simultaneously by the United States settlers, the British, the Mexicans and the Russians - an inextricable tangle of exploration, nomenclature and laws". He saw cybernetics as providing a respectable home in an interdisciplinary no-man's land where scientific chaos reigned due to a lack of understanding between specialists - a kind of Esperanto in Babel. He defined cybernetics simply as "a study of control and communication in the animal and the machine".

The book became a scientific best-seller, and Wiener, after a lifetime as a highly specialized mathematician and, at the age of 60, became hailed as a generalist genius. Indeed, Edward de Bono in his book *The Greatest Thinkers* lists Wiener as being in the top thirty league alongside Moses, Newton and Einstein. That 1947. Where is this enthusiasm now? What is cybernetics in the year 1980?

The answer to the above question differs depending on where in the world one looks. In the United States, cybernetics would have to be called cybernetics. Those who insist are, at worst, considered to be cranks while, at best, a little old-fashioned. Genetics is thought to have been superseded by other things: systems theory, artificial intelligence, bionic engineering and so on.

In the UK the science is a little more respectable, in the sense that several learned societies support the discipline and some universities offer degrees in cybernetics. However, the degrees vary in emphasis. For example at Reading, one learns instrumentation science, at Kent the electronics aspect of control and information is central, whereas at Brunel a post-graduate activity deals with the philosophical and organizational aspects of cybernetics.

Wiener's gospel soon found disciples who pursued these four guidelines well into the sixties. Notable in the UK are the late W. Ross Ashby, who studied the control of bodily functions (breathing, heartbeat, etc.) as examples of super-stable control functions. Staf-

ford Beer, who tried to apply the formalisms of control and information to a study of managerial structures in organizations; Gordon Pask, who extended notions of models of individuals to models of groups of interacting individuals; and finally, Frank George, who has advocated both the application of computers to human problems and pursued Wiener's philosophical momentum in areas of teleology. In Naples, Eduardo Caianiello founded a Government Research Centre called the Cybernetics Laboratory, which still pursues inter-disciplinary research.

Despite these major contributions, the sixties and early seventies saw the original concepts of cybernetics being overtaken by tempestuous advances, both in technology and methods of formal analysis.

The digital computer was central not only in the technological revolution, but also on the analysis front, where it gave rise to new methods of studying informational processes under the headings of "automata theory" and mathematical linguistics.

A desire to exploit digital computers in areas previously reserved for humans led John McCarthy to coin the phrase "artificial intelligence" (or AI) in the late fifties. Although, at first, this seemed to support Wiener's first principle of using machines to understand the philosophy of human intellect, fascination with the problems posed by overcoming speed and storage limitations of digital machines led to AI becoming a methodological Everest in its own right.

Predictably, I shall argue positively for cybernetics and try to meet the objections. To do this one must identify areas of scientific concern which can be described most easily by use of the word cybernetics even in the 1980's.

It appears to me that Wiener's four principles are more resilient than as painted in the paragraphs above. The very fact that *artificial intelligence* developed a dynamic of its own has prevented it from making an impact on basic questions in philosophy, for example, the problem of consciousness and the mind-body discourse. Indeed, the cybernetician has the freedom to enter philosophical discussion by using hypothetical machines where the AI practitioner is chained to the earthy limitations of real computers. Some philosophers may argue that one need not refer to machines at all, but the very fact that cyberneticians feel that purposefulness, that is teleology, is at the heart of goal-seeking control mechanisms, gives them a front seat in philosophical debate.

In a similar way, the statistical-algebraic shift in the analysis of information has not taken the business of studying human interactions out of the cybernetics arena. Again, Winograd and Abelson's type of work is related to the digital computer, whereas Gordon Pask's work, concerned as it is with almost hypothetical adaptive conversational machines (stemming from his experience with real teaching machines), has a freedom which makes cybernetics a suitable home for applied epistemology, that is, a formal study of knowledge structures. An extension of Pask's work also leads to a "second-order" cybernetics, which is another way of referring to self-referential systems where the observer and observed are treated as parts of the same research target.

On Wiener's third principle, the fact that linear control theory has reached its limits when applied to information-based systems, does not vitiate the principle itself. Indeed, *autonomous theory* has provided new ways of studying complex systems with feedback. One such system is a set of interacting genes and the cell replication and differentiation which result from such an interaction. In 1969

The highest degree of respectability is found in Eastern Europe. In Romania, for example, the Academy of Sciences recognizes cybernetics as a fundamental subject in the sense that Bucharest sports an Academy for Cybernetics where work on management and business studies is in progress. Looked at closely, a cybernetician in Eastern Europe is usually one who applies computers to a wide range of quite commonplace problems such as, perhaps, the administration of a mine or a hospital.

On the whole, however, the scientific and technological communities in the West find it difficult to place cybernetics into a serious scientific framework. What has gone wrong?

To understand the supposed fall, one must understand the rise. When defining the effective range of cybernetics, Wiener drew attention to four important concepts. First, he pointed to the impact on philosophy caused by the advent of machines that process information and control things in a way that is similar to that of humans. He saw that man-made human-like automata would not threaten the supremacy of the human intellect but, on the contrary, might lead to better models of concepts in philosophy and psychology.

Secondly, he publicised the idea that amounts of information and, indeed, the human activity of communication, could be measured in a statistical manner laid down largely by Claude Shannon of the Bell Telephone Laboratories.

Thirdly, he pointed out that the control engineers' calculations regarding feedback in a system (and the stability or oscillation which results, depending on the characteristics of the messages that are fed back) could be

The second principle appears to have dissolved in smoke as it became clear that statistical measures of information led one away from probing the nature communication between people. The old joke of the difference

applied to human situations. For example, hand tremors described by medicine as *astasia* (inability to position the limb where required), could best be described by an analysis of the transmission of messages sent by the receptors (eyes, say) to the brain, and the brain to the hand muscles (forming a loop, since the hand is observed by the eye) in much the same way as the control engineer studies loops in an automatic control system such as the guidance of a space rocket. Indeed, it is this study of control which gave rise to the word Cybernetics (from the Greek *kybernetes*, or *steersman*).

Finally, Wiener drew the parallel between a digital computer and the human nervous system in a most interesting way. Although the computer as proposed by Von Neumann in 1946 was a novel notion, Wiener suggested that this was only one of a possible set of structures, and that in his foreseen future, more advanced structures with capabilities of self-adaptation and consequent learning (as in neurons, the cells of the brain) would become feasible.

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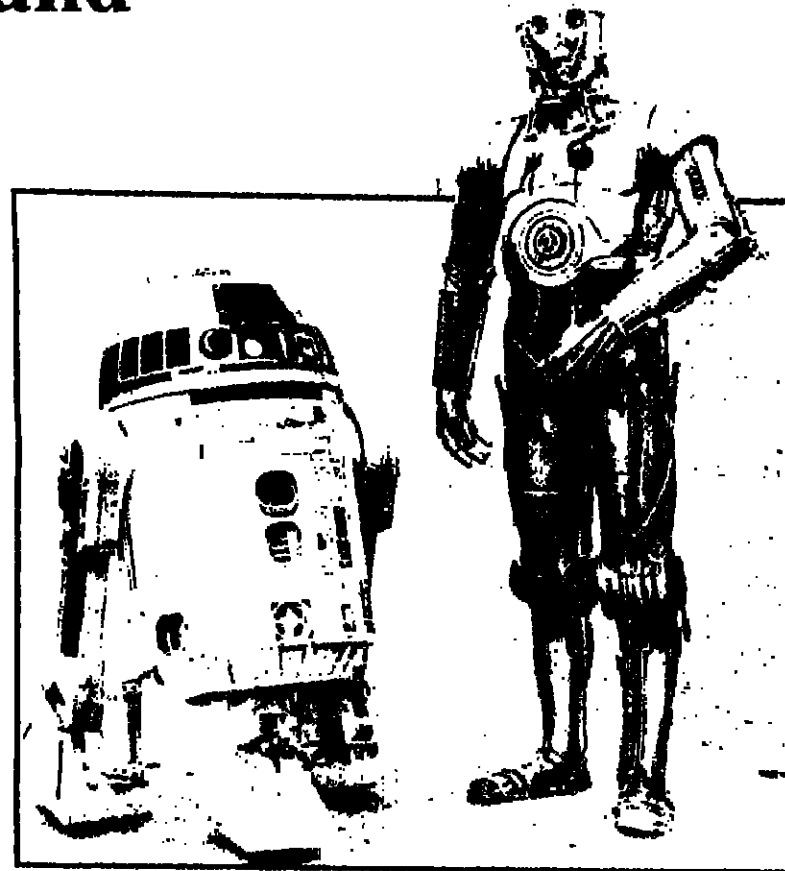
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On Wiener's third principle, the fact that linear control theory has reached its limits when applied to information-based systems, does not vitiate the principle itself. Indeed, *autonomous theory* has provided new ways of studying complex systems with feedback. One such system is a set of interacting genes and the cell replication and differentiation which result from such an interaction. In 1969



since the success of the conventional structure of the digital computer has led practitioners into the development of ever more sophisticated software, and new, human-like architectures have not emerged. Indeed, there is a tendency to see those working on architecture inspired by the nervous system as being out of touch with the wonders of programming. So, is cybernetics merely a ruin, or does it still describe a sensible field of activity?

Predictably, I shall argue positively for cybernetics and try to meet the objections. To do this one must identify areas of scientific concern which can be described most easily by use of the word cybernetics even in the 1980's.

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Although the all-embracing nature of the case I have just made may argue for the existence of cybernetics as a field of endeavour, there is a danger that the definition might embrace too many (or possibly, all) aspects of scientific effort and therefore be totally over-inclusive, this time for not being sufficiently discriminative. That is, there ought to be a simple test to determine whether a piece of work is or is not cybernetics. I believe that such a test exists, that it is discriminatory and, indeed, very simple. If Dr X has a passionate interest in discovering what makes living things tick and uses formal methods (e.g. automata theory, mathematics or engineering analysis) to verify or nullify a formally stated theory, a hypothesis or a model of such living things, he can safely choose to call his work cybernetics.

The author is professor of electronics at Brunel University.

Grand design that should go back to the drawing board

My daughter is preparing for medical school; I asked her how she would respond to a school based on the following principles:

1. The teachers are doctors who, in the main, seek out the company of only the rich and powerful in society in order to promote their career.
2. There is little encouragement within the school for students to view medicine as something which directly affects all in society.
3. The great majority of cases studied are to do with rich patients and their ailments and involve a great deal of cosmetic surgery.
4. The mass of poorer patients are used for the occasional experiment involving operations that are often not strictly necessary because such patients have least power of resistance should things go wrong, as they invariably do.
5. The students are led to believe that fact that the profession is controlled by, and at the service of, those with wealth and power, is the natural order of things.
6. To this end the student's education is directed almost entirely towards a career in private practice; public medical service rarely appears on the curriculum.
7. Those few doctors who postulate that medicine is a general subject affecting all citizens and that certain groups, due to economic and environmental factors, are more prone to a range of ailments than others, are dangerous radicals.

Her response was that such a school would not — and certainly should not exist: apart from the ethical issues involved, the standard of medicine in such a school would be abysmal.

With a few notable exceptions the above is a fairly accurate analogy of the schools of architecture in Britain, and this is not to deny that, within each school, there are a minority of both teachers and students who passionately believe that architecture is a social art for the benefit of all and not only, as William Morris put it, "for the swinish luxury of the rich." Overall, the British schools of architecture represent a social scandal. I am informed that, by 1978 figures, it costs society about £100,000 to "create" a doctor; even if the "price" of an architect is only half that, the cost to the British public (all classes) of supporting the 35 state-funded schools of architecture is phenomenal. Yet a cursory examination of what is on the drawing boards of those schools presents an unarguable case for the public, and particularly the poorer classes, to withdraw support unless there is a radical change in the curriculum. Almost without exception the students are being prepared to serve only those with wealth and power.

But something is beginning to change and there is growing evidence that students throughout the country are becoming aware of the dilemma. During 1979, as chairman of the Schools of Architecture Council, a national body incorporating the schools of architecture in Britain and Ireland, I travelled the country and, in the bars of numerous provincial railway stations, I listened to the grievances, the frustrations and the growing anger of an increasing number of students. They declared the meaninglessness of much of their project work; the lack of communication with their teachers and, specifically, with other schools of architecture. They objected to the superficiality of the more glamorous section of the architectural media with its deliberate policy of sanctifying a select group of living architects and transforming them into "super", "meta" and "mega" stars. They were encouraged to play at God by producing megalomaniac schemes to mislead the eye with flashy presentation. If we start, to question we are called naïve; arrogant or both. If we persist we are threatened.

As I travelled it seemed to me that a type of "Gulag Archipelago" existed in the world of architectural education and as the students exchanged ideas and reports on their schools (sometimes written in secrecy), it was as if, like the Soviet dissidents, they were creating their own "samizdat".

In November 1979 900 people gathered at the top of the 20-storey Arts Tower of Sheffield University for

In our continuing series on professional training, Brian Anson subjects the world of architecture to critical scrutiny



a three-day festival of education. The majority were architectural students and, representing 29 separate schools of architecture, they had come in response to a pamphlet issued by the SAC titled *Whose Education is it Anyway?* It was the largest gathering of architectural "personnel" this century. The chaos that ensued was not unexpected, but it was chaos of a creative kind — a loosening up of attitudes; a phenomenal show of initiative and, most important of all, a sense of occasion and co-operation which allowed participants to speak out openly against what they saw as wrong in their education.

A year later, in November 1980, 500 gathered at the Hull School of Architecture for a second festival again promoted by the SAC. The scale of the gathering was still large despite the fact that some heads of school and senior staff members tried to sabotage the event by making it difficult for their students to attend. By this stage the dilemma was becoming clearer; the students acknowledged that fear was a dominant force in their education — a fear that they would not get through their course. Significantly they began to question who, or what, controlled their education, and from Hull there emerged a national student magazine to provide communication throughout the country. Its first editorial states that part of the dilemma results from "...an impossibly tight timetable and over-structured courses which prevent any student initiative..."

Finally, in January this year, the students, from their own initiative, (but acknowledging the inspiration of SAC) organised a one-week "alternative school of architecture" in Glasgow. Two hundred and fifty students representing 21 schools each paid £15 (of their own money) to participate in a co-operative venture with a range of international tutors whose collective views of architecture covered conceptual art to methods of "subverting the system".

Sheffield, Hull and Glasgow are all part of a new mood amongst the architectural students of Britain. The nature of the malaise which they are attacking is still not clear to them but they seem to be echoing the eight Swedish students who, in 1961, addressed a pamphlet to assembled Nobel scholars in Stockholm. The blank verse titled *To Supermen with Love*, read: "We do not trust you and we are not grateful; you dine too often at the houses of the rich; you never stood up successfully against the military. And then we are crowded into soulless

cities having things done to us. We cannot describe the exactly what the thing are, but we know you have not considered our aid yet."

As one of the instigators of this mood I am happy that the students at last beginning to question the nature of their education and I am appalled at how the principals of the schools of architecture with a handful of notable exceptions have, resisted this new mood of questioning the status quo and have closed ranks to prevent spreading. But though this movement for change will inevitably result in a loosening up of the curriculum in the schools and give the students a much greater say in the decision-making process, the results of which, I believe, will make for a better environment in the years to come; unless they meet the central dilemma — the social advance of architectural education — there will be no fundamental change. The roots of the problem lie deep and concern two fundamental issues: the iron grip which the Royal Institute of British Architects has on the educational process, and, most important of all, a re-definition of architecture itself in the world of architectural education the sins of the fathers need, are visited upon the sons!

The Institute of British Architects was established in 1834. By 1887 it had acquired the prefix "Royal". Its formation was a symptom of the political and economic changes which were turning the career of an architect from that of the gentleman amateur into a recognisable professional body. Having gained its royal status, RIBA had vigorously to obtain in law some form of restrictive registration not allowing the title "architect" to only members of its own institute. Publicly it argued that society needed protection from unscrupulous and untrained designers; in reality its main objective was to resist competition by the "closed shop" principle. There were at the time several other associations of architects, surveyors and designers, including William Morris's "English Free Architecture Movement". RIBA's latest search for power was vociferously opposed both in and out of Parliament. Morris, in a letter to the *Times* 1891, argued that the architect's talent was unexamined and pillaged the RIBA for the way "...the architect is carefully guarded from the common troubles of the common man, building only for ignorant, purse-proud, and machines..."

Despite setbacks the RIBA persisted and by 1930, (by which time RIBA was by far the largest organisation.) opposition against any form of registration had relaxed. The RIBA supporters in the Commons agreed that a registration bill would lead to the abolition of slums.

"There is nothing more pathetic and shameful than to go into the slums of our big towns and see how squallid the lives of some of our people can be..." (Hansard, 7.11.30)

The absurd argument that the abolition of slums and the recognition of the city by the architectural profession would solve the problem of social squalor, was countered by opposition in the Labour Party. "...By the bill, complete power is given to 7,000 (the number of members of the RIBA) of examination that no lad of my class would ever have any opportunity who soever of entering the architectural profession..." (Hansard, 17.4.31)

Other socialists tentatively supported the bill because it seemed to solve Trades Union principles.

The act was passed in 1931, though registration was to be voluntary and any one body was to be prevented from seizing control of the architectural profession and, specifically, its educational base.

The Architect's Registration Council of the United Kingdom was established as an independent body to control all aspects of architecture. Its membership allowed for a wide range continued on facing page

"It's beautiful - perfectly beautiful..."



of views including the public's. In addition the act created the Board of Architectural Education to make recommendations to the council concerning examinations.

Through disappointed that registration was not to be compulsory, the RIBA used the 1931 Act to strengthen its already considerable power. Through the sheer size of its membership it used its majority on the Registration Council to secure a majority of nominations on the Board of Architectural Education. As it had its own examination systems (and in due course its own formal visiting boards to schools) it used its majority on the BAE to make sure that educational policies were that of the RIBA. When, in 1938, a second Act made registration compulsory, the RIBA had, to all intents and purposes, complete control of architecture. Yet it has never been anything but an expensive "private club" which no architect is legally obliged to join. We thus have the anomaly in architecture of a legally constituted body which was specifically given "teeth" to prevent monopoly, having had those teeth withdrawn on almost the first day by the organization which sought the monopoly! Some in the Labour opposition recognised the absurdity as the 1938 bill was forced through: "...When the 1931 Act came into force the first thing the RIBA did was to seize control of the Council. They next seized control of the Board of Architectural Education; they predominated on the Council and it became known as 'the gremophone...' (Hansard, 17.12.37)

As one academic has pointed out, "...It is clear that the delegation of responsibility for architectural education from ARCUK to the RIBA, was in defiance of the Registration Acts. It is certainly immoral and possibly in breach of the law..." (John Fraser, 1977)

The history of the post-war period, is that of a series of major RIBA conferences and reports each one attempting to further restrict entry to the profession. In 1945 the RIBA's special committee on education insisted that standards were too low in the schools and, fundamentally, that universities were the appropriate "home" for courses in architecture as opposed to the art and technical colleges which then housed many of them. The McMorran Report of 1955 added to this "elevation" the suggestion that architectural training should be closely linked to management in industry.

But it was the Oxford Conference of 1958 which really narrowed the route into architecture. Raising the entry levels to schools of architecture to two A levels, the RIBA in one fell swoop eliminated most other methods of training for the profession other than a full-time course (preferably at university). Apprentices schemes; day-release; the pupillage system and most part-time courses were systematically eliminated.

By the time of the next major conference at Cambridge (it was surely deliberate policy for the RIBA to hold its two major conferences this century in an Oxbridge setting) there were 34 schools of architecture recognised by the RIBA. The UGC had not sanctioned full university status for all of them, and the Institute, with less than enthusiasm, had accepted that the newly emerging polytechnics could provide a home for some of them. Where Oxford had successfully brought architecture out of the mere world of the craftsman, the apprentice and the tradesman, and put it in its "rightful" niche as an intellectual pursuit, the Cambridge conference reinforced that role by dwelling almost entirely upon theory in architecture.

The two major decisions to arise from Cambridge were the need for a drastic reduction in the number of schools and a plan to formalise the curriculum. The RIBA suggested that "...perhaps 15 schools were about the right number..." a figure which conveniently related to the 13 university schools existing at the time.

In the early 1970's the radical organisation ARSE (Architects, Radicals, Students, Educators) correctly pointed out the three crucial aims underlying the educational policies of the RIBA:

- Status: universities, Oxbridge, elitism.
- Numbers: restrictive practices.
- Control: of education.

In 1963 ARCUK (still RIBA-dominated) "formally" handed over entire responsibility for education to the institute; and from then on the Registration Council was just a rubber stamp on RIBA policy. And this is the system as it prevails today, with the power of the RIBA so complete that the great majority of students believe they are obliged to join the RIBA and with very few of them even knowing of the existence of the Registration Council. The Institute meanwhile continues its century-long effort to restrict architecture to the select few; in an RIBA report of 1980 it asked: "...is it fair to students, to the profession or to the clients and users, to allow standards to fall in all schools, rather than to encourage the more healthy survival of the better schools? Is the action of market forces with slow strangulation better than a more positive policy of concentration?"

Not content with seizing educational power from ARCUK, the RIBA continues to defend belligerently its domination of the Registration Council as a whole. In 1977 the National Architecture Movement (NAM) gained six of the seven seats reserved on ARCUK by the Act, for "unattached architects" (ie, non-RIBA). According to the Architect's Journal the RIBA used a "three line whip on its members to prevent NAM gaining seats on ARCUK committees". As NAM member David Burney has recently pointed out: "The RIBA has such a pervasive influence in the schools of architecture, through which it successfully perpetuates its ideal model of the architect (private practice entrepreneur) by the indoctrination of generation upon generation of stu-

dents. This process has succeeded, assisted by RIBA marketing and propaganda, in making RIBA synonymous with the idea of the profession and architectural education as to be rarely challenged, even by the students."

The RIBA's absolute control over architectural education effectively prevents the students from appreciating the deeply-rooted anti-social nature of the profession and, by definition, from searching for a new way for architecture. When there appears no other way, only the brave and the foolhardy question the status quo.

As a layman I can accept, as a workable premise, that medicine concerns the physical and mental health of all that law is founded on the principle of equality for all citizens. This will seem simplistic to the initiated in both professions, and indeed may be far from the truth in practice. Nonetheless, through such premises I can relate my layman's views to subjects which I feel have some relevance to my daily existence; I am not entirely excluded from confidence that their education systems have, at least some, useful relevance to society as a whole. This is not the case with architecture. The profession (RIBA) could not offer such a basic premise to society — it does not! To perpetuate the mystique it must have to disguise its true nature (an elitist "business" purporting to be a social "art") the profession chooses to regard its history as a succession of technological, methodological and stylistic innovations from Vitruvius, through Palladio and the Modernists to the 101 new "isms" it has invented since the second world war: "Post-modernism" (quantity referred to as "the menopause") has been its latest garb but, as Aldo Van Eyck rages, "neo-fascism" is digging in!

But the real history of architecture is simply the history of those who had the power to build. Architecture is the history of deeds done and, because they could not otherwise have functioned, architects have always allied themselves to the rich and the powerful. This alliance is as true today as it was in the days of the gentleman amateur — the seed from which the profession was born. The

history of those who refused the alliance could not be written and, of course, in any case, to the history of prevention which, outside of medicine, has a poor following.

Architectural patronage has two basic prerequisites — access to finance and control of land. In our society only the State and a minority of powerful organizations and individuals have such power. The present system of patronage is such that over 80 per cent of the population have no real control over what is built, where it is built and who uses it.

In self-defence the profession will argue that the State provides the necessary link between architecture and the public though, if nothing else, the manner in which local authority architect's departments are being decimated through Government cutbacks, do nothing to support that argument. However, even in times of economic growth the recipients of public architecture are "given" their environment and must adapt to it as best they can. The largest part of local authority finance comes direct from central government in the form of grants; local authorities function as the local arm of the central state and are subject to its economic and political vagaries. In order to keep down the local authority borrowings on the private money market, in this way, for example, one or more third of the housing expenditure of a typical London borough is swallowed up in interest charges. In any case the educational system spends little time on architecture as a public service; the ultimate model upon which it is based is the RIBA image of the private practitioner. In this model the client is all important and the student is made fully aware of the fact that the client holds the purse strings and takes his cues from accountants, not aestheticians.

Furthermore the state and the private sector often work in concert, particularly during a development boom. Then the profession willingly serves both masters, and the architectural schools go through an orgy of megalomaniac projects, frequently to the detriment of the general public. Nothing illustrates better the true objectives of the profession and the impact it has on education, than the "property boom" of the late 1960s and early 1970s. During those years, the value of land and the cost of construction rocketed; three times as much capital was put into property development (frequently left empty) as into industrial renewal. Whole areas of our towns and cities were decimated (with the social results still to come), and the fragile social links of poorer communities were permanently destroyed by wholesale demolition. During the "boom" the value of architectural commissions increased by 112 per cent, though the number increased by only 30 per cent; the profession was clearly reaping a bonanza from the over-inflated land and property values — values which had caused so much social havoc in society. Yet senior members of the RIBA Council argued: "...it is ridiculous not to develop a site to its fullest potential. There is no point in under-developing on valuable land... the most successful architects are those who understand the mechanics of property development..." (Urban Land, 1973)

Dr Patrick Nuttgens, director of Leeds Polytechnic, was quoted in *The Times* as saying, with some honesty: "...in a world where planning permission multiplies the value of a property overnight, and where the value lies in the site rather than what sits upon it, it would be naive to imagine that changes affecting our environment are initiated by anything but selfish motives..."

The greed and the megalomania of those years produced, in the end, a reaction within the schools of architecture. Many students and teachers protested at the inhumanity of what was taking place and led one, conscience-stricken RIBA councillor to plead: "...the students see the

RIBA's posture as one of detachment from the social problems of today; indifferent to environmental, violation by a materialistic elite, and preoccupation with the defence of a monopolistic and privileged position..." (James Latham, 1974)

But the property boom didn't last and the recession which followed brought a dramatic decrease in the profession's workload. For the student the only possible way for employment on graduation was to follow the way of the RIBA — the history of their educational process had mapped out no other. The recipient of their training was to be "served" (if he was a wealthy private client); to be "given" (if in the public sector) and to be ignored if he had no access to either. As regards these last members of society the architectural profession, if for no other reason, stands condemned throughout history. They live in the twilight areas of our environment and there are millions of them. They adjust the physical environment to best they can and the irony is that because they are forced to adapt their "knowledge" of "real" architecture is immense — if we define the basic premise of architecture as the physical backdrop to our existence, which I contend is the only workable definition! The paradox is that the profession (RIBA) acknowledges this definition in private; at its annual conference in 1977 it stated: "...Society needs a single professional who can control the whole creation of the environment... the distinguishing mark of the architect remains his personal experience of the whole built environment..."

Yet the profession remains ignorant of these twilight areas because they cannot provide the powerful patronage without which architecture (in the profession's view) cannot exist. To take a further medical analogy — it is as if the medical profession, for reasons of personal greed and ambition, had deliberately ignored a whole range of diseases peculiar to the poorer classes of society; to repeat, the result would be an "abysmal" standard of medicine!

And that, perhaps is the due to the real malaise. The ignorance of the controllers (the profession), has led, inevitably, to the illiteracy (of the subject) which characterises our schools of architecture. The equivalent in medicine would be medical schools devoted almost entirely to face-lifts; cosmetic surgery and the curing of the ailments of powerful potentates. And when they are not training to cure the environmental ills of the rich and the powerful, the schools are turned in upon themselves pondering esoteric theories to design. As Dr Patrick Nuttgens points out in his excellent *Burton Design Award paper, Learning to see Purpose*: "There seem to be periods in the life of all institutions when their leaders become so self-concerned that they turn in upon themselves and concentrate upon their own self-improvement and self-preservation rather than the service they do to the outside world. Society may hammer upon the door and shout for them to come and lend a hand in the street. Mostly there is no answer..."

The revival of student ferment in the world of architecture is to be welcomed — it is long overdue. The objectives the students have set themselves (through Sheffield, Hull and Glasgow) will provide a much-needed loosening-up of the system. Greater student involvement in the decision-making in the schools; a relationship with local communities, and a quest for objectives other than those of the RIBA — all these, if achieved, might pave the way for the real question — how do we return architecture to all the people in our society — and how do we answer us they hammer on our door?

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BOOKS

All time is unredeemable

From Being to Becoming: time and complexity in the physical sciences by Ilya Prigogine

Freeman, £13.50 and £6.30
ISBN 0 7167 1107 9 and 1108 7

by P. T. Landsberg

From the great and slowly changing Book of Physics, in which are recorded the consensus views of physicists, lofty themes of wide interest and dominating philosophical importance are excluded because they are not agreed—a reason for the difference between past and future; is chance or determinism dominant; the nature of measurement in quantum theory; the emergence of order in biological evolution; the maintenance of structures (for example, genetic material) in spite of the ravages of time. All these still controversial topics find at least a mention in this volume.

When arises this multiplicity of themes? It is extruded by an inner pressure within physics due to its successful treatment of normal bodies like boats, balances and beams, as well as small particles like electrons and atoms which are a million million times smaller in size. This, and the additional size factor of more than a million million million which arises if one goes into astronomy, is what sets up the process. It is so hard to bring it all under one hat!

There is first of all the problem of consistency: are the laws of the very small consistent with those of the boats and balances? This gives rise to the odd situation that the important processes between microscopic particles are unchanged even if the Creator threw a switch which reversed the direction of time. But this would produce chaos in ordinary life with waterfalls and rain ascending upwards, not to mention the somewhat sordid appearance of life processes when reversed in time. How can this discrepancy possibly be understood if human-sized things are to be explained in terms of the properties of microscopic objects?

Secondly, there is the need to bring into line the emergence of fine and improved biological species with the known deterioration of all moderately isolated physical objects like cars, batteries and television sets; and even biological specimens lose teeth and hair with lapse of time. This is the problem of evolution versus entropy. And by what quirk of circumstance could life have arisen from a hot soup which was merely a carrier of physicochemical processes? These are the questions behind several chapters of Professor Prigogine's book.

It may be of help, however, to begin by considering the historical developments in which this book is the most recent step, for they illustrate rather well the themes that Prigogine touches on. On a wider historical canvas, then, our story contains the illustrious names of Clausius, Carnot, Kelvin and Boltzmann, who showed in the second half of the nineteenth century that the entropy of a finite isolated system tends to increase. Broadly this means that a physical system left to itself tends to get more disordered: ice-cream with hot chocolate sauce tends to become a lukewarm mess with everything mixed up. Why "tends to" and not an unequivocal "does"? That is because of the first problem identified above: for "small" systems the entropy is liable to oscillate, and for "microscopic" systems it is a parameter which is believed to be of little interest at all. You see, there is just a possibility that the ice-cream will be cooled further and that the chocolate sauce may boil in virtue of some conspiratorial re-arrangement of energy (not of a creation of energy) among the atoms. But, as we know from experience, this is very unlikely.

In the 1960s the journal *Nature* carried a number of such contributions by Wigner, Woolhouse, Popper, myself and others. This phase of looking for biological insights by using the general principles of physics without, however, letting the mathematical analysis burst out in new directions was concluded with four volumes published under the editorship of C.H. Waddington in 1969-1972 with the title *Towards a Theoretical Biology*, and in the book entitled *Theoretical Physics and Biology* edited by M. Marolt (1969).

In the meantime evidence had accumulated for biological oscillations. Nicholson (1954) had found a periodic time of 30 to 40 days for the numbers of a blowfly *Lucilia* in an experimental population to which unlimited food supply was available; the moth *Bombyx* exhibited a number fluctuation with a period of about six years in pine forests in Germany (1949); Gossard (1963) had discussed sustained oscillations in controlled biochemical systems incorporating feedback; in the USSR, Zhabotinsky and co-workers had studied oscillatory processes in chemical and biological systems. In another direction Prigogine (1968) had suggested that the energy supplied to biological systems might in part be stored in an ordered fashion which would lead to long-range correlations.

By the 1970s interest had shifted to systems in a steady state maintained by absorption and rejection of appropriate streams of energy. Such systems often had



Ilya Prigogine, professor of chemistry at Université Libre de Bruxelles, director of the Centre of Statistical Mechanics and Thermodynamics at the University of Texas at Austin, and winner of the 1977 Nobel Prize for Chemistry for his work on non-equilibrium thermodynamics.

properties of solids and of stellar interiors. As assumed in Max Born's *Wynnelect* Lectures, the *Natural Philosophy of Cause and Change* (1948), the deterministic classical mechanics had been replaced by the quantum mechanical ideas that microscopic physics could not penetrate (as yet?) beyond statistical statements, so that determinism was at least temporarily dead in microscopic physics, and consequently very sick indeed in the rest of physics, chemistry and biology.

Although not mentioned by Born, Schrödinger had in the meantime (1945) used both thermodynamics and quantum mechanics in his seminal *What is Life?* In fact, a guttural complex was developing among us physicists that we had not squared up the ordering processes of biology—the emergence of new and better species—with the disordering tendency of entropy increase. The centre of interest was in fact shifting to the effect of the environment on systems: the "open" system moved to the centre of the stage. Schrödinger had already said that living matter feeds on negative entropy supplied by the surroundings, that is, it keeps its entropy down by losing some of it to the surroundings. This general feeling led to interesting discussions as to the way in which quantum mechanics could be considered compatible with the existence of self-reproducing structures.

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By the 1970s interest had shifted to systems in a steady state maintained by absorption and rejection of appropriate streams of energy. Such systems often had

their steady states far from their equilibrium states, were subject to non-linear equations, and could be taken from one regime to a completely different regime by the manipulation of external conditions—such as the electric field in physical problems or food supply in population problems. These induced such sudden changes in the system that one referred to them as "non-equilibrium phase transitions". The normal phase transition is also sudden (like the freezing of the condensation on one's windshield, but that is a near-equilibrium change).

Now attention was focused on the non-equilibrium cases which make life so happy: the sea which suddenly flutters in the wind, the waves which break on the beach, and so on. Indeed, inspiration for the understanding of some of these phenomena came from population dynamics considered by the American Alfred Lotka many years earlier (1924). After all, one could easily find oscillations in populations. For example, too many predators lead to a shortage of prey and hence of food, so the predator population decreases. This leaves the prey to establish themselves more strongly and the whole cycle is repeated. Of course, if the interaction between predator and prey is of a special kind, a completely different regime can occur: the prey can die out, followed inevitably by the dying out of the predator for lack of food.

The richness of structure in these non-equilibrium systems brought about by the non-linearities was very impressive, and many books and reviews were written in the 1970s in this stimulating border territory between physics and biology. The problem of evolution was also covered: *La Genèse de la Vie* (Monod, 1970).

Evolution (Lampson, 1971), *Complexity in Ecology* (R. M. May, 1973), *Selection* (illustrated by the result of randomness in board games (Das Spiel, Eigen and Winkler, 1975), the development and spatial form of living things (*Stabilité Structurale et Morphogénèse*, R. Thom, 1972), *Self-organization in Non-equilibrium Systems* (Nicolis and Prigogine, 1977), the combination of cycles of chemical reactions into "hypercycles" (Eigen and Schuster, 1978)—all these varied topics are related to each other by the mathematics used (itself related to what is popularly called catastrophe theory) and the phenomena that do may think of a new single subject of which these phenomena are special cases, and the term "synergetics" has been introduced for this purpose (Haken, 1977).

In this impressive list the word "self-organization" also enters with special reference to life, and it needs a precise explanation. In a narrow sense, it is the capability of certain forms of matter to give rise to self-reproducing structures under fixed external conditions and internal interactions; interesting examples are chemical autocat-

alytic reactions in which the steady non-equilibrium state is maintained by the supply and withdrawal of chemical reactants. The most complex examples are the biological ones of reproduction, and their treatment leads one to the hope of improving our understanding of the origin of life. The concept of self-organization is used also in more general and less well defined senses. Here it has been confined to something close to "autocatalysis", which refers to a chemical reaction which is catalyzed by a product of the reaction.

The last step is the approachment now advocated by Prigogine between thermodynamics and thermodynamics. In this advocacy another exciting system becomes his ally (not mentioned in his book, but noted in my own 1978 book). This is the black hole. It is a sobering thought that the parameters of mechanics (albeit relativistic mechanics) have in this system received a thermodynamic interpretation.

One should retain one key idea from the work of the past decade or two: the conceptual struggle to hold on to the evolution of the Universe due to the second law of thermodynamics has been broken. Increase of disorder, the end of life, the heat death—they all apply to "closed" systems which approach equilibrium. But is the Universe approaching equilibrium? Or will gravitation (neglected in standard thermodynamics) prevent it? Also the systems in the Universe interact and are not "closed", thus opening the way to the development of novel and unexpected non-equilibrium states as evolution proceeds. Darwinian optimism is winning the upper hand over the pessimism of the physicists at the end of the nineteenth century.

Now to Professor Prigogine's book itself. Time and its problems dominate its stimulating and tantalizing contents. The author's large views and suggestive additions to our vocabulary are worthy of a Nobel prize winner. I differ with him only on a few points. One is that time is by no stretch of the imagination "the forgotten dimension". Philosophers and physicists vie with poets like Lucretius and T.S. Eliot, and historians and psychologists, to drain time of its mystery. It is forgotten neither in the West nor the East, neither in this century nor in the last century. So, quite on the contrary, this is another book on time. However, it is different from many others, for it contains ideas which appear here for the first time in book form.

There are three parts to the book: "The Physics of Being", "The Physics of Becoming", and "The Bridge from Being to Becoming". Perhaps the simplest picture of a physical system is "just being", in contrast to a changing system, is provided by the block universe of general relativity theory. In this model we envisage a representation of particles in four dimensions, one of them being "time". A human being is represented by a three-dimensional tube, representing

his size in normal space, and his travels are represented by re-positioning this tube as a function of a fourth variable, namely time. These four dimensions a man's birth and his death occur at the ends of his world tube. The history of the Universe is then a vast conglomeration of lines and tubes in four dimensions.

In this block universe nothing seems to happen: the world lines are there all complete. Past and future are not needed. But the author does not use this picture of "being"; in fact, relatively theory, which has great deal to say about time, is last mentioned. For Prigogine it is not relativistic mechanics that is of interest in Part One. The key point here is that while classical mechanics is deterministic, under the parameters in the differential equation governing the motion nor the initial conditions, nor other boundary conditions, are known with infinite precision. This leads to a practical problem. However, it leads to the need to introduce probabilities in order to give an adequate description of some such classical mechanical systems. These, particular systems are such that a slight change in parameters or in the boundary conditions can lead to a profound modification of the motion. Technically this idea, for example, when the natural frequency of the system are linearly dependent in a certain way. With his gift for creating a phrase Prigogine calls these resonances a "Poincaré catastrophe". (It should be noted that there is a considerable Russian literature on this topic.) Large amounts of energy can be transferred from one degree of freedom to another and the unpredictability of the trajectory of the system (as plotted in some phase space) means that statistics can be called in at this point. Attention is thus drawn to the fact that even in good old mechanics, with definite boundary conditions, statistics may be needed. This is an important point rightly emphasized by the author.

However, this interesting point is made as clearly as one might hope expecting Whitaker's adelic integrals (1937) and their heads but not their bodies (for they remain unexplained) on page 41 (this whole discussion is in fact not suitable for the general reader with some background in physical chemistry and thermodynamics) (publisher's blurb on the back of the book).

Part One concludes with a useful but standard introduction to quantum mechanics. This leads Prigogine to consider Einstein's old question, as to whether or not quantum mechanics is complete; his answer (page 70) is that it is not. This is a highly controversial subject, related to problems of philosophical issues, for example, if there is action-at-a-distance in physics. My own guess is that physicists split into two groups of about equal numerical strength: one group regards quantum mechanics as complete, following Bohr and his followers; and a third group does not hold any view on the subject. In any case, probability enters physics a second time through the interpretation of the wavefunction, having already by way of the Poincaré catastrophe. It enters by a further mechanism, that of statistical mechanics, in Part Two. A really full discussion of all these different needs for probability in physics would have been particularly welcome. But it is satisfactory that the matter is at least noted.

Part Two ("Becoming") deals with thermodynamics (accidentally displacing Godel and Thomson by 100 years on page 70), self-organization and fluctuations. This is fairly technical, even for readers of the *THES*, and I therefore have to invent an example by way of illustration. Consider a refrigerator which is either in a refrigerating state (when the refrigerator is circulating) or in a passive state (when it is not circulating). The stability of each state is illustrated by the fact that if one operates the refrigerator so as to make the system go from one state to the other, then it will return to the original state. Suppose that, instead of modern gadgets, we had known that the refrigerator plugged into the mains had always been in its passive state. The temperature inside was always equal to that outside: it was in equilibrium. However, one very hot day we found that it had (amazingly) inside is cooler than the outside; the system is in fact now driven far from its equilibrium state. We have discovered a new state. This refrigerant state is one in which the electrical energy from the mains is dissipated into the circulation of the refrigerant; it is a dissipative state. Furthermore, when the system is close to such

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Metaphor and irony

Sources, Processes and Methods in Coleridge's *Biographia Literaria* by Kathleen Wheeler
Cambridge University Press, £17.50
ISBN 0 521 22690 2

New Approaches to Coleridge: biographical and critical essays edited by Donald Sultana
Vision Press, £12.95
ISBN 0 85478 294 X

Biographia Literaria has always presented peculiar problems to Coleridgeans. Even by the difficult standards of Romantic aesthetics it is a difficult book. The first volume is a strange mixture of autobiography and philosophy—the latter seemingly a mixture of assertion, unfulfilled promises, and a mosaic of plagiarisms, including, notoriously, large passages from Schelling. The second volume, though it has a discussion of the *Lyrical Ballads*, is equally notoriously, less about Coleridge than Wordsworth.

In spite of some brave attempts to demonstrate a coherent structure, most readers (and it has had plenty) have tended just to accept it as an inextricable, and inexplicable, mixture of gold and dross. Kathleen Wheeler's book is perhaps the boldest attempt yet to show a unity of structure behind the haphazard appearances. In spite of the pedestrian implications of the title, her aim is less to reassemble the fragments by scholarly archaeology than to effect a radical transformation of our perspective on the whole work: to reveal the apparent confusions, borrowings, and discontinuities as themselves the qualities of a subtle and sophisticated work of art, changed with layer upon layer of meaning.

Preferring to work with a few examples in depth rather than make any attempt to be exhaustive, Dr Wheeler begins by demonstrating both that Coleridge himself always perceived an organic unity behind his method of working in the *Biographia*, and that, so far from being a hasty assemblage of ideas from 1816-17, the main points of its arguments had long been present in his mind. Her case is convincingly argued. Dr Wheeler is at home with the minutiae of Coleridge scholarship (in the form of letters, notebooks, and marginalia, as well as with the published works, and she moves easily, and with as much clarity as the subject permits, between such fragments and the systems of philosophy, Greek, empiricist, and German, from which he borrowed. She has in particular an impressive knack of re-interpreting Coleridge's own depressing remarks about his book by close reading and good use of his historical context.

Good as she is on the philosophic background, the never makes the mistake of regarding Coleridge to be merely an eclectic "philosopher", but endorses the case that some of us have been arguing for years that there was never any real break between his poetry and his philosophy. The philosophizing of *Biographia Literaria* is thus to be understood within the organic

life. What is meant by it? (I have already explained it a little above.) The implication in the book (page 119) is that the word refers to a dissipative state with a periodic spatial pattern such as is found in certain important and much discussed chemical reactions. Although this does not do full justice to the term, reflecting again a certain lack of focus in the book, it certainly gives us a way of thinking and speaking about the emergence of ordered biological systems, of chemical and biological evolution. The trajectories of mechanics and the wave some idea as to the balance of chance and necessity. (In Southey we have tried to illustrate each one of these ideas by making use of well studied properties of semiconductors.)

In Part Three the notion of the Poincaré catastrophe (furthered and mathematical concepts which have been considered in the past are formulated in a new way. They include operations for entropy and time, "the consequences of which must yet be explored" (page 210). They are interesting and suggest how thermodynamics can be attached more closely to mechanics than has been considered in the past.

Self-organization! This is another word of importance in this book, hinting at rudimentary ideas concerning the origin of

unity of a work of art, rather than simply as argument. "The surface fragmentation of the work," she claims, "is given a structural unity and coherence by a method of metaphor and process of irony" (page 59). Both volumes she sees as organized around a series of "metaphoric situations" (taken to Wordsworth's "spots of time" in *The Prelude*) which circumscribe acceptance of the argument at a merely rational level, and challenge the reader to might a work of art, into indirect self-examination. This "method" she links ingeniously with the German Romantic notion of "irony": not so much a device of humour as a serious awareness of double-meaning in experience.

This is a highly ambitious book, executed with verve and skill. If Dr Wheeler sometimes papers over the cracks (the problem of the plagiarisms, alas, will not just disappear) her main case is a convincing one. Though controversial rather than definitive, this is a work that all future scholarship on the *Biographia* will have to take into account.

Kathleen Wheeler is also a contributor to Donald Sultana's collection of essays, *New Approaches to Coleridge*. The title, however, applies better to her book than this one, since it has few obvious new approaches, and more than half the essays (as implied by the more modest subtitle) biographical notes on Coleridge's relationship with some other contemporary literary or political figure, or institution. Althea Hayter writes entertainingly on his connections with Byron and Drury Lane as a background to his critique of Maturin's *Bertram*. Geoffrey Cannon, Eric Anderson, Marion Lochhead, Margot von Rumburg, Alexander Kern, and Wheeler herself cover some aspects of Coleridge's relationships with Hazlitt, Scott, John Gibson Lockhart, John Hookham Frere, the American Transcendentalists, and Ludwig Tieck, respectively. All are interesting, though very much occasional pieces, with no common critical themes emerging.

The remaining essays, on such assorted critical topics as "The Influence of Cowper's *The Task* on Coleridge's Conversation Poems" (by Ann Matheson), the philosophical influence of scenery in Coleridge's blank verse poems (by John Guttridge), disagreements over Coleridge's symbolism (by H. W. Piper), and the influence of water images on Coleridge and Wordsworth (John Beer) are all in the conventional mould of Coleridge criticism. For me, John Beer's discussion of Coleridge's "anxiety" to be influenced, and his notion of "unstable images" was perhaps the most rewarding. Certainly the oddest essay in the collection is Donald Sultana's own lengthy account of a group of the Malta manuscripts: most of which was devoted to a hostile review of David Erdman's edition of Coleridge's *Essays on His Own Times* for the *Collected Coleridge*. One can only admire the dedication to scholarship which provokes such heat.

Stephen Prickett

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BOOKS

Dickens and disharmony

The Reader in the Dickens World: style and response by Susan R. Horton
Macmillan, £15.00
ISBN 0 333 27692 2

Dickens at Play by S. J. Newman
Macmillan, £12.00
ISBN 0 333 26153 4

Both these books are concerned with the variousness of Dickens's technique. Susan R. Horton, always with an anxious eye on pronouncements from recent linguistic and structuralist critics, considers many of the "disharmonies" in his novels: the comic transformed into the unfunny, changes from authorial omniscience to affected bewilderment, moralizing rhetoric unrelated to description, and other discrepancies. She argues that the reader, challenged to choose among interpretations and responses, is thereby led to create a text of his own.

While aware of this currently popular approach to reading, Mr Horton could have usefully remembered the pressures of nineteenth-century literary convention. Some features of Dickens's art about which she makes heavy weather were quite commonplace. For example, the novelist's claim to be uncertain about action and motive was a favourite play. Repetition of phrase and gesture which may cause ambiguous responses in the modern reader could, at the simplest level, help Victorian readers to a serialised story. And the desirability of peopling novels with numerous minor personages was defended by Charles Kingsley: "you must have people coming in, influencing your principal characters for a while—people do influence you and me, and then go on their way."

Her conception of the populous "Dickens world" is confusing. Usually, she

identifies it with the major personages and plot of a novel, perceiving "another and more mysterious world at the peripheries of the novel," where "peripheral" characters exist. Furthermore, she finds a character who is merely spoken about as "not in the novel at all". Yet she refers to the feeling that "the Dickens world is a world of richness that exceeds that generated by the plot". Granted that feeling, talk of "peripheries" is irrelevant. There are some minor puzzles as well. She says that the death scene "isn't even there" in the *Old Curiosity Shop*, despite the beginning of chapter 72. And does she really mean that David Copperfield is "anguine" about the frightening episodes on the Dover road?

But although the book has passages of vagueness and the over-evident, it has some pertinence to the way the reader can reach Dickens. Its close analysis of textual detail, emphasizing its discrete nature, can here and there sharpen appreciation of his linguistic and emotional complexities.

In defining the "play" of his title "in terms of fancy, language and theatre", Mr Newman is explicitly contradicting this principle with "Coleridgean, Arnoldian, Jamesian and Leavisite" principles of responsibility and wholeness. He separately examines each of Dickens's early works up to and including *Martin Chuzzlewit*, recognizing, like Susan Horton, the juxtaposition of many modes and feelings as a source of the author's imaginative power. An exception, in his view, is *Pickwick Papers*, "the only book in which Dickens suppresses violent contrasts of mood and material". His happy innocence is due to the "genial censorship" of Sam Weller, whose sardonic observations, Newman maintains, have a therapeutic effect.

Although he contends that Dickens's imagination developed by means of diversity, he often sees a pervading theme or

substance of the plays in the poetic texture itself. He discusses at length the work of Wilson Knight, L. C. Knights, and Caroline Spurgeon, usefully surveying the whole body of their commentary on Shakespeare and measuring the advantages and limitations of each point of view.

Mr Viswanathan's account is nothing if not judicious. In the end he doesn't insist on the peculiar merits of "poetic interpretation", and cautions against a preoccupation with any critical method which takes no account of the dramatic life and historical circumstances of the plays. He finds that the urge to read plays as poems typifies an era, and puts it in its place with the other partial responses to Shakespeare. His attitude is to reconcile critical differences and hold to what seems sound and helpful in the practice of all the schools. Such determined circumspection leaves him without a positive argument, and with only the lame conclusion that there is value in isolating an aspect of Shakespeare's plays for concentrated attention as long as the critic doesn't lose sight of the "composite wholeness of the drama". We must go on reading the plays with our intelligence as widely alert and well-informed as we can make it.

The book will nourish critical intelligence and prove a useful aid to the study of Shakespeare. It offers a clear map of Shakespeare criticism and has a particularly helpful select bibliography of the field. The coherence of its plan and shrewd common sense of its judgments make it a sound book to recommend to students.

A. J. Smith

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The *Common Community under Henry VIII* is the first volume to be published in the Rutland Record Series and comprises the master book for Rutland of 1522 and the lay subsidy rolls of 1534-5, which together form a unique survey of the county. The Rutland Record Society has also recently inaugurated a journal, *Rutland Record*. Both publications are available from the Rutland County Museum in Oakham, priced respectively £7.95 (plus 85p postage) and £1.95 (plus 55p postage).

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Partial responses to Shakespeare

Shakespeare and the Critics' Debate by Raymond Powell
Macmillan, £8.95 and £3.50
ISBN 0 333 27666 3 and 27667 1

The Shakespeare Play as Poem by S. Viswanathan
Cambridge University Press, £12.50
ISBN 0 521 22547 7

Was Shakespeare a man of protean receptiveness and negative capability? Or should we see him as an imperfect artist whose formal designs are forever being disrupted or contradicted by his creative urge to seize the fulness of life? Mr Powell engagingly attempts to account for divergent readings of the plays without lapsing into relativism or approving a free for all, but his arguments might have been more cogent if he had remained clear whether he is dealing with a playwright whose intentions are perpetually at odds with one another, or with a body of work which exhibits no identifiable intentions. Some of our difficulties with Shakespeare seem to be bred in the confusion of our response to art.

Mr Powell sets out to show students the range of Shakespeare criticism, which he displays in lengthy studies of three plays and summary accounts of another four. He stimulatingly sets off one view of a play against another and indicates the different general attitudes to Shakespeare which sustain each reading. His special concern is to trace the cause of such differences in some special character of the plays; and he locates it in the self-contradictions he detects in Shakespeare's writing. The display of critical disagreements opens into an attempt to bring out the superlatively discrepant elements which cause them.

We might do better to show our students why they need not be surprised to find that the complexities of art evoke different responses in different readers. Some of the critical development Mr Powell mentions arise out of difficulties with the moral categories of plays which admit no facile resolutions of such problems as how a man may reconcile his sublimity with his humanity, his martial prowess with his compassion, his sensual nature with his idea of

justice, his recognition of inveterate malice with his charity.

We see what contradictions arise if we habitually impose our own moral terms upon the plays instead of sympathetically trying out the prospects they offer. In dramatizing our contrarious nature Shakespeare continually invites a mixed response which partial reading only falsifies. Do we take Prospero's "I, thus neglecting worldly ends", for a confession of human frailty, or as marking a self-dedication to a higher ideal? The opposite possibilities need not exclude each other in a just understanding of the conditions of human engagement with the world; and Shakespeare's vision surely comprehends both of them.

The doubtful attitudes Mr Powell discovers in *Love's Labour's Lost* and the *Henry IV* plays might be seen as an essential constituent of the work, not so much excluding or negating each other as opening a larger understanding of the terms on which we have our social being. Well before A. P. Rossiter's account of the subversion of order and degree in the chronicle plays Brooks and Headman showed how the fine balance of contrary elements in *Henry IV* evokes a comic vision, at a level beyond moral judgment. And we really do find two plays pulling against each other in *Love's Labour's Lost*. Or are the supposed contradictions inherent in Shakespeare's understanding of the human material itself? We see that the head and the heart may be drastically at odds in the amorous urges of intelligent young men and women; that a man may cherish his masculine independence in innocence of his own erotic nature; that real feeling need not impede the clear-headed recognition of the distance between infatuation and love. Self-pickiness and tenderness, idealism and solemn state are complementary aspects of a full comic rendering of our lives.

Mr Viswanathan also takes on the jungle of Shakespeare criticism but is more concerned to make an orderly vista of it than to set its fragments at odds with each other. He summarizes the main approaches to Shakespeare's plays, bringing out the attitudes and assumptions which underlie them. Mr Viswanathan is particularly occupied with critics who have sought the

BOOKS

The banks' control of British industry

Pension Funds and British Capitalism
by Richard Minns
Heinemann Educational, £13.00
ISBN 0 435 84510 1

Ask a hundred people arriving at Victoria Station one Monday morning what they consider the outstanding features of the British economy since the war. It is a fair bet that the answers you get will include inflation, unemployment, the Common Market and even perhaps a low rate of economic growth. Yet there is another far less widely appreciated characteristic that is just as important. It is that we live in an age in which economic power has become more and more heavily concentrated. I am not referring to the growing importance of government and large trade unions but to the concentration of business in big corporations.

Much of the credit for documenting the growth of industrial concentration should go to the National Institute of Economic and Social Research, but it has had rather little popular impact. One leading study is S. J. Paine's *Evolution of Giant Firms in Britain* published by the Institute in 1976 (and happily reissued last month in a

student paperback edition). Paine showed how the largest 100 business enterprises in manufacturing have almost doubled their share of total output since the war, reaching 40 per cent by 1970. His work can be viewed, in a sense, as a starting point for Richard Minns's valuable short new book which explores concentration in the financial sector and attempts to unravel some of its implications for the control of industry.

Minns approaches the question of who really controls British industry by way of an analysis of the activities of pension funds. It is well known that the share of private individuals in the ownership of industrial companies has suffered a dramatic decline in recent years, while the financial institutions have taken the dominant role (the proportion of all UK quoted ordinary shares that they own rose from 18 per cent in 1959 to 48 per cent in 1975). It is also widely realized that a major cause of this change is to be found in the rapid growth of private and public pension funds. Minns sets himself the task of investigating the way in which these pension funds are controlled. He conducted a survey of 66 funds and his results are decidedly illuminating.

It is necessary to read the book to follow

the analysis fully, but its conclusion is that control has become increasingly concentrated in the banking sector, broadly defined. Reasons for this have been the practice of pension fund trustees of employing outside managers, from banks, and the reliance, even for internally managed funds, on "professional" investment advice.

His new evidence gives Minns an opportunity to quantify the power of the banking sector. Because it controls about two thirds of superannuation funds, he estimates that it controls about 17 per cent of company shares, while owning less than 1 per cent of them. Minns develops his thesis of the increasing influence of banks (including merchant banks) through fund management and the way they can channel investment into their own unit and investment trusts and towards companies for which they act in customer-banker relationships—relationships which are, to say the least, potentially incestuous. This gives the banks power greatly in excess of that indicated by their relatively small direct shareholdings. Minns goes on to argue, crucially, that the banks need for short-term profits has implied a reluctance to invest in long-term productive enterprise in favour of that in the financial sector itself, so that the institutions increasingly control themselves by the use of clients' shareholdings. Moreover, Minns even suggests that this development may imperil the capitalist system if failure to invest in productive enterprise continues to create insufficient real growth in the economy to pay for future investment.

The argument of the book is impressive, though it is clear that more research is needed to amplify these first conclusions. The identification of where control really lies is undoubtedly highly complex. There are, for instance, still many large companies where private individuals (including family trusts) are in control and the situation varies not only from company to company but also from one country to another. The most controversial part of the book is in the last chapter where the author sets out his proposals for neutralizing the economic and political power of the financial sector by extending the use of the National Enterprise Board and the creation of Local Authority Enterprise Boards to manage pension funds, taking a long view and channeling investment into productive enterprise. There will be many, not only bankers, who may have doubts about whether the author's policy recommendations would prove as effective as he would wish in achieving desirable enough aims.

Some may point, for instance, to Germany whose better growth record is at times attributed, at least in part, to the banks' traditional and direct involvement in industry. In that country, however, banks act as industrial financiers with long-term stakes and not simply as investment portfolio managers. But whether or not Minns has produced the best solution to the problem, his book is a most welcome contribution to an important matter which has not been fully appreciated—the growth of concentration of power in the banks and other financial institutions.

This is an issue of the utmost relevance for the British economy. It calls for hard thinking, extensive debate and more research, especially into the decision-making process in bank activities and the extent to which banks succeed in wearing separate hats when managing pension funds and when advising the companies for which they act as bankers. It is to be hoped that this book will be widely enough read to stimulate such research and debate.

Colin Harbury

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Why the jobs have gone

The Workless State: studies in unemployment
edited by Brian Shawler and Adrian Sinfeld
Martin Robertson, £15.00 and £4.95
ISBN 0 85520 327 7 and 340 4

Political Quarterly 52, no 1: Unemployment Symposium
edited by David Watt and Rudolf Klein
Political Quarterly Publishing Co, £4.00

Unemployment is once again the economic and social scourge of our time. The government has abandoned the historic commitment to full employment because it is too proud to talk with those who set costs.

Unemployment, and poverty in the midst of plentiful resources, was the great challenge that drew so many brilliant minds to economics in the interwar years. It is doubtful whether it will now attract more brilliant minds because the nature of the challenge is very different. In the 1920s the facts were in search of a new theory to replace an old orthodoxy. Today there is no theoretical lacuna. The challenge is a social and political one of how to bring about the institutional and structural changes to reconcile the conflicts between full employment and wage inflation, and between growth and balance of payments stability in an increasingly competitive world economy. Neither of these volumes addresses itself to these challenges, but they are none the less timely and interesting for that.

Keynes wrote to an American friend in 1931, "to read the newspapers just now is to see bedlam let loose. Every person in the country of super. assinine properties, everyone who hates social progress and loves deflation, feels that his hour has come, and frequently announces how, by refuting from every form of economic activity, we can all become very prosperous again. There must be a terrible feeling of *déjà vu* among those who witnessed the debates in the 1920s. Whoever thought we would return to the economic philosophy of yesterday with all the same parrot-like slogans and the belief that austerity and retrenchment are the mother of prosperity?"

There is something almost Calvinist about the present attitude: that unemployment has to do with the failures and inadequacies of the unemployed themselves. You are damned if "young or old or unskilled, with a large family, living in a council house in the northern half of Britain" (as Professor Nickell shows in research elsewhere). One merit of the Shawler-Sinfeld book is the strong evidence they bring to bear that the causes of the incidence and severity of unemployment are very much external to the person out of work. It would have been difficult, of course, to reach any other conclusion. The postwar British economy was managed with unemployment of less than half a million for more than twenty years, and in 1974 the figure was little more. Economic structures and the personal characteristics of individuals do not change so radically to produce two million extra unemployed in seven years.

The *Workless State* contains several useful chapters. Shawler surveys historically various theories of unemployment; Deacon looks at unemployment as an issue in British politics; Sorrentino makes international comparisons of unemployment, which scotch the myth that unemployment in Britain is simply the outcome of the international recession. Michael Hill analyses unemployment and government manpower policies, and Sinfeld emphasizes the humiliation and degradation of unemployment for the unemployed and their families in a society where the work ethic is paramount. He champions the concept of "work for all" as a social policy in the tradition of Beveridge: "Jobs rather than men should wait".

Most of the essays in the unemployment number of *Political Quarterly* attempt to reveal the human drama that lies behind the statistics. There are various regional portraits, and a comparison, by Jeremy Seabrook, with the 1930s. All these essays remind us of the insidious long-term effects of unemployment which go beyond the breakdowns, suicides and divorces which highlight the tragedy of individual cases.

What to do? Maurice Peston tells us that we are now in such a mess that even if 150,000 jobs were created annually, there would still be 1.5 million unemployed in 1990. He may be right, but it is too strong to say that Keynesian theory and policy forbid real wage resistance in the upswing. As marginal unit labour costs fall, increased employment and real wage increases are quite compatible—as Keynes recognized in his famous 1939 article. Austin Mitchell MP traces the historical slide into destructive deflation, and puts the alternative Keynesian case in a lively and attractive way. I agree with him that there must be a long-term foreign trade strategy to halt delapidation. There is a limit to the degree to which the service sector can cushion a contraction in manufacturing, because service demand itself depends on industry. I challenge his optimistic belief that currency devaluation could launch us on a virtuous circle of export-led growth. It is not true that "it has worked in the past, boosting output and exports without disastrous inflation".

Clyden and Shaw examine historically the impact of unemployment on wage bargaining and are not sanguine that the short, sharp, shock tactics applied to "teach the unions a lesson" will make any lasting difference to the scramble for bigger shares of the national cake. The experiment will have been in vain, Heron lies the re-entry problem which monetarists eschew. Cucheil used to say that "it is better to let the law, rather than war, win". That is common sense, and in the present context must mean some form of social contract. In the meantime I agree with Keynes that "it is much worse in an impoverished world to provide unemployment than to disappoint the enterpriser".

A. P. Thirlwall

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Pessimism and apprehension

The Political Economy of Tolerable Survival
edited by Maxwell Gaskin
Croom Helm, £12.95
ISBN 0 7099 0262 2

The title suggests that this book must be a reassessment of the ecological and environmental disputes of the early seventies but there is no mention of these or the fashionable controversies anywhere in the book. It is in fact a collection of the papers delivered to Section F of the British Association at its 1979 meeting in Edinburgh.

"The theme of 'tolerable survival' was suggested by the contemporary mood of perplexed pessimism and apprehension about the course of events in Britain, and for that matter in Western society as a whole," states Maxwell Gaskin in his introduction to the book. But such a mood could be said to be endemic to British society, so perhaps one should be more specific and set the mood in the (1979) context of zero growth, high unemployment, and 20 per cent inflation, so that tolerable survival seems to imply that

these conditions will neither improve nor get noticeably worse.

The book is in two parts. The first, more general part, consists of three papers: Maxwell Gaskin's presidential address deals with the problems of inflation and unemployment; David Marquand discusses the political context of these problems; and David Reisman's "The Social Limits to Tolerable Survival" is a critique of Fred Hirsch's book *The Social Limits to Growth*.

The words "political economy" indicate that the review of contemporary British economic problems in this collection of papers is not narrowly economic nor is it only by economists. In the second group of more specific papers half are by non-economists. These contributions range in level of generality from Colin Crouch's discussion of the political economy of inflation to a detailed discussion of community development in the Scottish Highlands. The four contributions by economists deal with regional development, the urban economy, North Sea oil and the international adjustment process. With only just over two hundred pages of

text, few of the 11 authors have the opportunity to do much more than set out the dimensions of the problems they discuss. The most interesting papers are also the most specific. Colin Robinson's survey of the impact of North Sea oil on the British economy is sufficiently detailed to allow one to draw one's own conclusions. The discussions of community development, the changes in social structure in Scotland, and the increasing social mobility are all, on different levels, absorbing.

Of course these papers are also those which have least to do with the theme of "tolerable survival". Perhaps their authors were wise. The book's title is meant to refer to the economic problems, and the intellectual climate, of 1979. But too close a reflection of this climate means that only a few months later some of the discussion is beginning to date, as we experience the less than tolerable economic conditions of 1981.

Alan W. Evans

Alan W. Evans is reader in environmental economics at the University of Reading.

Inequalities of a market economy

The Colony: But Whose? A study of the labour movement, labour market and labour relations in Hong Kong
by H. A. Turner, et al
Cambridge University Press, £11.50
ISBN 0 521 23701 7

It is not clear why Professor Turner chose his title. This book is not about the propriety of Hong Kong; it claims to be "by far the most intensive survey of the territory's labour market and industrial relations (in the broadest sense) to have been made". It is not in fact a fully comprehensive survey of job regulation in the colony—a word, by the way, that has been dropped from official Hong Kong Government usage—but rather concentrates on two questions: first, the reasons for the weakness of trade unionism and the underdevelopment of collective bargaining and, second, the reasons for the apparent lack of pressure from employees themselves for improvement in social provisions of the kind normal in industrial societies.

These questions have been tackled before, and of course much of the ground and some of the conclusions will be familiar to the few specialists in this field. What makes the book particularly valuable, apart from the careful scholarship behind the analysis, is that it deals with a wide range of comparative knowledge of industrial relations systems, how the first-time been able to bring to bear upon the assumptions and tentative conclusions of previous studies the results of extensive fieldwork carried out in 1976-77. Apart from the interviewees with representative associations, unions and local firms, the team made first time plant

survey of a hundred factory workers and then a systematic sample survey of the attitudes and circumstances of 1000 employees—probably, as the authors say, the largest venture of this kind so far undertaken in a developing country. Another first the authors claim is that they present evidence of the attitudes and policies towards bargaining and dispute settlement of the "left-wing" (that is, People's Republic-associated) Federation of Trade Unions, to the affiliated unions of which nearly three quarters of Hong Kong trade unionists belong.

Professor Turner's writing is thorough, informative and stimulating. He throws new light on a large number of old questions, confirming established views sometimes but more frequently presenting evidence and arguments which challenge the established orthodoxies. His analysis will be essential reading not merely for all those interested in Hong Kong and its problems but also for those who want to understand the working of one of the world's most explicitly capitalist economies.

Milton Friedman has been seen by television viewers expounding the virtues of a market economy against the backdrop of Hong Kong harbour, but before we get carried away by the Hong Kong success story it is well to examine the particular political, cultural and geographical circumstances in which it has unfolded. Professor Turner concludes that these "deter the extraction of principles for other cases", pointing out the irony that "what seems the paradigm of Friedmanite competitive prescription should depend on its symbolic convenience to a Communist economy".

This is just one of the paradoxes revealed by a study of Hong Kong, and when the authors address themselves to the question, "Should, anything be

most other writers have been. Having chided those others for their tendency to import inappropriate models, the authors are unable themselves to come up with anything strikingly original. Among their proposals are unfair dismissal legislation, workplace councils for joint consultation, a statutory minimum wage and a contributory unemployment benefit and pension scheme. These would be very important reforms, and the substantial lack of joint committees with statutory backing and a real role to play would be potentially a powerful agent of change. However, the final chapter on prospects and propositions lacks the depth of the earlier analysis and will disappoint many of those who were awaiting Professor Turner's verdict. Moreover, while many, like myself, will reluctantly agree that revolutionary change is inappropriate in Hong Kong's unique circumstances, not all who know and have lived in Hong Kong will fully appreciate the authors' near total detachment. They find Hong Kong "peculiarly interesting" and suggest cautiously when mooting reforms, "there are perhaps also considerations of equity".

There are indeed. One can only hope that the authors' dispassionate and modest approach helps to move the Hong Kong Government and business establishment towards the amelioration of some of the grosser inequalities and injustices inherent in its industrial relations system.

John Reay

John Reay is head of the faculty of political studies at Newcastle upon Tyne Polytechnic.

BOOKS

Liberty and equality in marriage

Marriage and the Family in Eighteenth-Century France
by James F. Traer
Cornell University Press, £9.00
ISBN 0 8014 1298 6

Marriage and the family and related questions of sexual behaviour have been a major growth area in social history for almost two decades. These issues have attracted both demographers and historians of *mentalités populaires*, the latter basing their observations on folklore, confessional manual, criminal records or memoirs. They have proved less of an attraction to historians of institutions or those concerned with the intellectual formation of lawmakers. James Traer, however, is a rare exception.

Traer has taken the substantial corpus of legislation compiled by the French revolutionary assemblies relating to divorce, civil marriage, the abandonment of infant baptism and the religious ceremonial surrounding death, the new laws of inheritance permitting equal division among children of both sexes, the abolition of *lettres de cachet* which had been an important means of family discipline for the wealthy, permitting the imprisonment of aberrant mem-

bers, and has summarized all other legislation between 1792 and the Civil Code which might have had some bearing on family life.

Such a work demands to be used in courses concerned with the French Revolution, but it achieves a wider significance by considering the intellectual influences upon revolutionary legislators. Traer analyses the attack on marriage by Enlightenment writers in a significant body of literature. In their view indissoluble marriage was an insupportable bondage, foisted upon society by a dictatorial, corrupt and superstitious church; they saw the availability of divorce as the best way of guaranteeing healthy marriage.

Thus far the volume cannot be faulted. It is when the author seeks to extrapolate fundamental social consequences from changing legal formulae that he falls into traps which might have been avoided by a closer look at legislation in practice. He is not warranted in asserting that the French Revolution "shattered permanently the structure of traditional marriage in France" and in his justification of this statement by reference to the obligatory civil marriage ceremony and state recording of birth and death, services previously performed by a

parish priest. The new succession laws, he argues, and the fact that anyone who lived in a town knew someone who had a divorce, an appreciation that "everyone who lived through the Revolution knew at least some meanings of the words liberty and equality", are used by the author to substantiate a view that marriage could never be the same again.

In fact, for the 50 to 90 per cent of peasant families (according to region) whose lot was a subsistence unit, and to the families of urban labourers and small craftsmen, the new succession laws were an irrelevance. If people married in a civil ceremony, they also after 1796 married in a religious one, and studies of the work of the priests of the Mission de France reveal them performing church ceremonies for those who received a civil marriage during the Revolution as late as the 1820s. The evocative study by Roderick Phillips, *Family Breakdown in Late Eighteenth-Century France* (1981) shows how geographically and socially circumscribed was the phenomenon of divorce. The wives of *émigrés* sought divorce so they could hold on to their property, and abandoned wives used to make possible a remarriage. A few urban women, victims of indescribable male violence, gained a

respite by divorce (before the Civil Code) but they were a tiny minority. For rural women, there was no world into which to escape.

As for notions of liberty and equality, one should try the works of Richard Cobb with their graphic descriptions of death, disease and death which accompanied Revolutionary dislocation. Everything we know about the post-1796 period suggests that both rural and urban France sought to reconstruct the traditional bonds of family life, and J. L. Handrin's work makes apparent how unchanging the rural world could be even in the late nineteenth century. Industrialization which lifted girls out of the rural communities into burgeoning crowded industrial towns gradually eroded ancient family structures and ignored the conventional standards of an earlier society, but the process was gradual. A successful revolution can easily achieve a transference of political power and the emergence of new elites, but the centuries-old rules governing popular behaviour cannot be taken by storm, but only slowly eroded.

Olwen Hufton

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The case for Kornilov

Russia 1917, The Kornilov Affair: Kerensky and the break-up of the Russian army
by George Katkov
Longman, £9.95 and £4.95
ISBN 0 582 49101 and 49102 9

In the old days we used to think that the failure of liberalism was an interesting question in Russian history. After the Bolsheviks' victory, émigrés and others quarrelled as to what might have been done to stop it—more liberalism, or less to the economic problems, and the intellectual climate, of 1979. But too close a reflection of this climate means that only a few months later some of the discussion is beginning to date, as we experience the less than tolerable economic conditions of 1981.

By early September 1917, matters had reached such chaos that many Russians of the propertied classes desperately wanted a general to restore order. The army had broken down; it had just lost East Galicia and Riga. The Bolsheviks, temporarily put down in July, were recovering; and as Kornilov himself complained to the effective head of the Provisional Government, Kerensky, every day there were fresh reports from the countryside of seizures of estates, and seizures of lands. Kornilov saw himself as "the man on the white horse": he would use his position as commander-in-chief of the army to restore order in Petrograd.

He moved a cavalry corps, and his own guard of Central Asians or Caucasians, to the capital. The whole affair broke down quite quickly. The soldiers, on reaching the outskirts of the capital, went over to the workers; the generals who led them were arrested; Kerensky himself, and his radical-liberal associates, tried to use the affair to document their revolutionary legitimacy, and to patch up their alliance with the Soviet. In the sequel, the general escaped and was able, in 1918, to organize the Volunteer Army of the Whites, though

Kornilov himself did not long survive to lead it.

George Katkov has devoted this useful two-hundred page monograph to a discussion of what happened, and what the sources displaying this amount to. He assesses the sides of the argument—Kornilov's, to the effect that he wished to save the government, and thought he had been misled by Kerensky; and Kerensky's, to the effect that Kornilov went too far ahead on his own, alarmed the revolutionary left, and provoked it into a more solid alliance with the Bolsheviks than would otherwise have been the case. Kerensky, later on, used to compare his situation in the Kornilov case with de Gaulle's in the Salvo case. On the whole, Kerensky's case has had the greater publicity and sympathy. George Katkov, by examining the documents on which it was based, redresses the balance.

This monograph was intended to be part of a larger history of the Provisional Government, itself designed to follow the author's successful *February Revolution* (1967). The larger book was not written, apparently, because the author's methods were judged by him unsuitable for such a large canvas. The days when we could write a history of the Provisional Government in terms of its members twisting and turning have of course long gone. If indeed they were ever there. As it is, the importance of this book is largely symbolic. The Russian army in the summer of 1917 was collapsing. Some generals wished to oppose the process by force and by hanging; by hunting for "agitators"; while some politicians, Kerensky at their head, hoped to deal with the crisis by concession and cajolery. Their disagreement—as often happens in bunker regimes—was only sharpened by the hopelessness of the cause.

Norman Stone

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James VI's remote control of Scotland

Government by Pen: Scotland under James VI and I
by Maurice Lee, Jr
University of Illinois Press, £9.60
ISBN 0 252 00765 4

Constitution does not make of the first king of England and Scotland attended him on his progress to London. In 1603, he had remained ever since. Today the Scottish king James VI's reputation stands high, but it is what Professor Lee rightly calls an "astonishing feat" that until now no political narrative of James's Scottish rule has existed. An historian with an unrivalled knowledge of Scottish politics has now filled that gap, and his book is an indispensable addition to the scanty history of the reign of James VI.

James's famous boast, that he could "govern [Scotland] with his pen", is a piece of rhetoric that has been frequently taken out of context; it was a short phrase in a long and moving speech in which the king, styling his case for union in 1607,

sought to persuade the incredulous and hostile English Commons that Scotland was indeed a well-ordered kingdom. James himself, vain as he could be, was never fool enough to believe that governing Scotland was a simple matter. Lee has now put him in the shoes of that over-quoted boast, and explained how it was done, showing how the leaders of Scottish political life, as well as the king, wielded the pen to notable effect. The heroes of his book are the earls of Dunbar, Dunfermline and, to an extent, Melrose, men all personally known to James before 1603, as were most of the ruling class of the post-1603 period; their contact with the absentee king was maintained by regular and detailed correspondence which displays considerable skill not just in the art of service, but in the art of persuasion.

The interest of his account emerges from the wish that there had been more. Lee's knowledge of English politics produces the interesting comment that Dunbar's death in 1611 removed a man whose residence

in London had kept James better informed about Scottish affairs than he was to be thereafter, and he reiterates this point with striking effect when discussing the crisis over the king's religious innovations, the Five Articles of Perth. But it was the fact of James's Calvinism, as Nicholas Tynache has shown, which gave him greater success with the English church than Elizabeth or Charles; this provides context for the apparently unnecessary mess this Calvinist king made of his relations with his Scottish Calvinist church. Here, as elsewhere, Lee's views on the interplay of English and Scottish politics, secular and religious, would have been well worth having greater length than was possible for him in this book.

More generally, Lee's thesis of transformation from "quasi-middle-class" to "modern" state—achieved by controlling the aristocracy—remains questionable. Did Charles I find his nobles more amenable than James VI had done? Lee quotes Dunfermline's comment about "our great

Jenny Wormald

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Workers' lives

British Labour History 1815-1914
by E. H. Hunt
Weidenfeld & Nicolson, £18.50 and £8.95
ISBN 0 297 77785 8 and 77786 6

It was appropriate that Edward Hunt's survey of labour history between the end of one Great War and the beginning of the next should appear at the same time as controversy over trade union (or at least union leaders') political involvements aged and discussion of the green paper on trade union immunities began. While assisting current debates, Hunt's long book does, however, have a longer-term importance.

Labour history has come of age—and not before time, many feel. For too long a few general surveys and urban histories which attempted to apply normal historical techniques and criteria have been swamped by waves of theoretical, sentimental or blatantly partisan publications. Hunt's excellent book will do more to promote labour history than a host of polemicalists. He modestly hopes that it may be "an introductory textbook that treats British labour history as a whole".

Hunt avoids undue concentration on union organization or the very poor, preferring to compare British and foreign experiences and to demonstrate how a maturing discipline should take cognizance of cognate studies (political, social, economic, industrial, demographic). Most important, he shows that labour history is more than a lurid account of class struggle and exploitation. Here is a rounded study of the lives of working people in the first century of industrialization, some of whom were in unions (vastly more were in friendly societies), some were deferential ("domestic servants adopted their employers' political views as willingly as they adopted their manners, advice and cast-off clothing") and a few were revolutionary, some maintaining "tramping" tradition to the extent of emigration and others, like the Suffolk labourer John Edmunds, thanking God to be "back in good old England" after a six-week trip.

Part one, on "the labour market, income and consumption", sensibly examines population, wages, living standards, poverty and migration, while part two briefly but comprehensively looks at "working-class movements": trade unions (from doubtfully legal societies to hopelessly illegal syndicates), Owenites, political factory and Poor Law reformers, Chartists, socialists, friendly societies and the "mechanics" of industrial relations. There will inevitably be criticisms of some omissions and omissions: I would have welcomed rather more on scientific management and free labour, and not everyone will agree with the many criticisms of the Webbs and Hammonds, Halvey, Turner, Thompson, Burgess and Hobsbawm. But readers will surely enjoy Hunt's perceptively controversial summaries: unions of the early 1830s "amounted to little more than strings of pretentious initials"; "if Owen was indeed 'the father of British socialism', final relations were sometimes strained".

Throughout, Hunt avoids "any analysis... which treats workers as mass", emphasizing instead his subject's rich diversity. There is Robert Walker supporting eight people on nine or ten shillings a week in Wiltshire in 1861. There is Engels calling the Irish "pimps, thieves, swindlers, beggars and other rabble". There is Blackburn Olympic winning the FA Cup against Old Etonians in 1883. There is George Tuthill making a record number of union banners in 1889. There are the horrors of the swamped industries and the shock of volunteers' poor physique in the Boer War—and a reminder that workers' diet in 1906 calorifically surpassed Strachey's post-1945 ration.

A second volume would be very welcome, to provide another synthesis of writings on events since 1914.

J. T. Ward

J. T. Ward is professor of modern history at the University of Stirling.

The Centre for English Cultural Tradition and Language at the University of Sheffield has published, at £20.00, a descriptive catalogue with indexes of *Ballads in the Charles Harding First Collection* of the University of Sheffield. The catalogue has been compiled by Peter W. Cornwell and is published to celebrate the centenary of the founding of First College.

Universities continued

PEPPERDINE UNIVERSITY
GRADUATE SCHOOL OF LAWPART-TIME
LECTURERS

(London)

The American Institute for Foreign Study, on behalf of the Graduate School of Law of Pepperdine University, Malibu, California, is seeking to appoint part-time lecturers in law to teach courses for approximately 20 students who will be in London from 21 August to 17 December 1981.

Lecturers are required in the following subjects:

- (1) The English Common Law
- (2) Contemporary European Trading and Financial Legislation.
- (3) International Maritime Law

Each course will be given for 3 hours weekly during the period indicated. A fee of £260 will be payable for each course.

Lecturers of application together with CV and detailed course proposal should be sent by 8 May to:

James C. Gillis
Director of Programmes
American Institute for Foreign Study
37 Queens Gate, LONDON SW7 7EL Tel: 01-861 2733

Further details available on request.

THES1

UNIVERSITY OF MAIDUGURI

Maiduguri, Nigeria

Applications are invited from suitably qualified persons for the following position in the Academic Planning Unit of the University:

DIRECTOR OF ACADEMIC PLANNING

Candidates must hold a good university degree. Higher degrees especially in the relevant area will be an advantage. Considerable experience in university administration and in financial planning are essential. Successful candidates will be expected to directly advise and assist the Vice-Chancellor in formulating the plans for new courses and in developing the academic Master Plan of the University. He will be required to undertake the costing of academic programmes, prepare accurate and capital estimates in collaboration with the Bursar and in conformity with the University's academic programme. He will also advise the Vice-Chancellor on the economics of teaching and on any other aspects of Academic Planning as may be required.

Salary Scale: £11,850.00 - £26,000.00. Point of entry depends on qualifications and experience. Nil + 20p. (The conversion is subject to changing currency rates. Salary scales and terms and conditions of service are under review.)

Conditions of Service: Appointments may be made for a fixed term normally for two years. Contract renewable by mutual agreement or on probation for two years. Contract extended or confirmed to retiring age. If services are considered satisfactory, fringe benefits include passages from and to for appointee and family, approved overseas leave, part-funded accommodation and housing allowance and medical allowance of 20% of basic salary for appointee and family. Other benefits include pension scheme where applicable as may be approved from time to time by the University. Other specific supplementary schemes may be available. Free medical clinic service, transport allowance.

Method of Application: Detailed applications (four copies) should include applicant's curriculum vitae as follows: name in full, place and date of birth, home address, current postal address and telephone number, nationality at birth, present nationality, marital status, number and ages of children, education and post-secondary education including dates and institutions, academic and professional qualifications including degrees with date, statement of experience including full details of teaching and research, list of publications (if any) and other relevant information. Applicants should also attach a list of referees, names and addresses of those referees, and a list of referees' names and addresses of those referees. Applications should be sent to the Vice-Chancellor, University of Maiduguri, P.O. Box 100, Maiduguri, Nigeria. Applications should be sent by 30th April 1981.

THES1

THE PAPUA NEW GUINEA
UNIVERSITY OF TECHNOLOGYPROFESSOR AND HEAD OF
DEPARTMENT OF SURVEYING

Applications are invited from suitably qualified persons for the above mentioned position.

Applicants must have high academic qualifications and should have significant experience in the following areas: industry, tertiary institutions and research. Applicants may be from any area of surveying, cartography, or related land studies. A firm commitment to the betterment of developing countries is essential.

The successful applicant will be the head of a department comprising eleven teaching staff and eight support staff. Courses are conducted in surveying, cartography and valuation at undergraduate and postgraduate level.

The appointee will be expected to take an active part in teaching, provide leadership in research, and be involved in university administration and professional activities. The appointee will be expected to take up duty as soon as practicable after 1st January 1982.

Salary: K20,000 per annum at (PNG K1.00 = A\$1.30; A\$1.51; A\$2.11; A\$2.61; A\$3.11; A\$3.61; A\$4.11; A\$4.61; A\$5.11; A\$5.61; A\$6.11; A\$6.61; A\$7.11; A\$7.61; A\$8.11; A\$8.61; A\$9.11; A\$9.61; A\$10.11; A\$10.61; A\$11.11; A\$11.61; A\$12.11; A\$12.61; A\$13.11; A\$13.61; A\$14.11; A\$14.61; A\$15.11; A\$15.61; A\$16.11; A\$16.61; A\$17.11; A\$17.61; A\$18.11; A\$18.61; A\$19.11; A\$19.61; A\$20.11; A\$20.61; A\$21.11; A\$21.61; A\$22.11; A\$22.61; A\$23.11; A\$23.61; A\$24.11; A\$24.61; A\$25.11; A\$25.61; A\$26.11; A\$26.61; A\$27.11; A\$27.61; A\$28.11; A\$28.61; A\$29.11; A\$29.61; A\$30.11; A\$30.61; A\$31.11; A\$31.61; A\$32.11; A\$32.61; A\$33.11; A\$33.61; A\$34.11; A\$34.61; A\$35.11; A\$35.61; A\$36.11; A\$36.61; A\$37.11; A\$37.61; A\$38.11; A\$38.61; A\$39.11; A\$39.61; A\$40.11; A\$40.61; A\$41.11; A\$41.61; A\$42.11; A\$42.61; A\$43.11; A\$43.61; A\$44.11; A\$44.61; A\$45.11; A\$45.61; A\$46.11; A\$46.61; A\$47.11; A\$47.61; A\$48.11; A\$48.61; A\$49.11; A\$49.61; 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(Department of Management Studies)
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(Department of Science and Mathematics)

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(Department of Tourism, Catering and Hotel Management)
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Dorset Institute of Higher Education
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Laurie Taylor



Of course I wouldn't mind so much if we got some genuine chance to have a proper discussion. You know, a real exchange of views. But quite honestly what did we have?

Not much. I mean, I know Kershaw is supposed to be the expert in his area, and we're all very glad that he could spare the time from his gardening to come and speak at our little conference and all that, but we haven't paid fifty quid for a weekend just to be lectured at.

No, I suppose not. And when we do get a few minutes for discussion you get someone like that fool from Tunbridge Wells with his Austin Reed safari suit rabbiting on about the problems in his firm. I mean who's interested?

Quite. Sits there with damn-fool briefcase with enough locks on to confound Houdini and bores everyone half to death talking about himself. And she wasn't much better.

Who's that?

The one with the T-shirt.

Oh yes. With 'Mrs' ostentatiously crossed off her badge and 'Ms' printed above it.

Oh yes. Mind you that's better than not wearing a badge at all. Nothing worse than those people who think they're so well known that they don't need any identification.

Oh no. That fellow with the red beard and sandals for example. Looks like some hangover from Aldermaston. Griniger's his name. Seen him a few times at other conferences. But I make damn certain not to crack on. If he can't be bothered to wear a badge then he'll have to fend for himself socially.

Quite so. Not that there's anything very social about this conference. D'you go to the reception?

No. Missed nothing. Two glasses of warm Frascati, a tomato sandwich and an illiterate speech from some bumbler who claimed to be the mayor. And the disco. What a sight. People who were brought up on Bing Crosby and Perry Como jumping around like lunatics to songs about vomiting and eczema.

I suppose the drink was talking. Must have been talking very quietly. I mean, have you tried drinking more than two pints of this keg. Swells you up like a balloon.

Still only another day. And another night. Don't forget that. Another night. Cramped up on one of those student beds which must have been designed for dwarf anorexics. Big poster of Marx glaring at me all night. Enough to turn anyone into a Social Democrat.

Suppose so. And tomorrow will be not better. Afternoon plenary session at which the executive congratulate each other on the wonderful job they've all been doing during the last year and try to keep talking just long enough to make most of us miss the early train.

Exactly. Still there's always the bright side. There is?

Oh yes. Coming across other people who think the same as you do about all this waste of time and money. That's what really makes it all worthwhile. Ready for another half?

LETTERS TO THE EDITOR

Interview that misled a graduate candidate

Sir, - With reference to the recent article 'Many job leavers blame recruitment literature' by Patricia Santinelli (THES, March 20) in my experience the interviews I attended were more misleading than the recruitment literature. My job search took place in 1979 resulting in my taking up employment in the engineering industry.

In reading the recruitment literature I regarded the information as an advertisement for the company and therefore expected the information to give an accurate picture. However, at the interview I believe I was deliberately misled in order to persuade me to accept the position offered. This is also the view of many of my colleagues who recently commenced employment from university. In my particular case, having a higher degree, I believe the amount of inaccurate information given to me was more than that usually given in order to recruit quality staff.

Some of the points I was misled over were:

(a) Salary. The salary I was promised on interview turned out to be more than I actually received once I commenced employment. Also promised

removal expenses were not paid.

(b) Workload. A very rosy picture of the current activities of the company was described at interview and I was led to believe that my specialist knowledge would be utilised to the full. Since I started I have been employed in what I consider to be relatively menial tasks and spend long periods without any work at all. A representation to senior management by myself and other recent graduates was met by the comment that the company considered that new graduates required a period of about 18 months before they were able to make a useful contribution. While no new graduate would be naive enough to believe that he was capable of making major decisions, usually he arrives with an enthusiastic mind ready to make an immediate contribution. This enthusiasm can easily be turned into frustration if the graduate's expectations are not fulfilled.

(c) Working conditions. On interview I was met in the personnel manager's office and then had further discussions in the offices of other senior staff. Upon commencement of employment I was placed in an environment which I

was unprepared for and unfamiliar with, and which I still find to be an annoyance when useful work is being attempted.

The above mentioned points are my experiences which have resulted in my being dissatisfied with my current employment. My employer appears to be unconcerned that the turnover of new graduates is high and does not therefore recognise that a problem exists and take steps to ensure that the new graduate remains for many years. What is required as part of the selection procedure is for an honest description to be given and a realistic picture of the employer that the new graduate, having spent several years learning his specialist subject, is usually willing to apply himself to practical, real-life problems, rather than those of an academic nature. In this way the graduate will achieve greater job satisfaction and the employer a greater number of years service.

Yours faithfully,
DR P. HEVES
3 Applegarth, Giberdyke, North Humberside.

Need to teach moral justice

Sir, - In your leader (March 27) you remark on the reluctance of Sir Keith Joseph to invest a comparatively small sum of money in establishing an engineering authority. It is impossible to see that this reluctance should be explained for there are those who may soon reach a conclusion that it may be his wish to "strengthen the engineering dimension within the British economy" as proposed in recommendation No. 77 of the Finlay report. He has already advocated, advantage to the overseas investor, our low wage economy and this may not be compatible with an economy that develops in the engineering dimension envisaged by Finlay. Do those responsible for commercial and financial activity really understand the role of industrial employment in our economy and its importance to the people?

Sir Alex Smith (THES, March 27) has already commented on the "technicist proposals" of the Finlay report. He might also have commented that the skills depends not only on the acquisition of effective use of skills but also on the opportunity to practise. Without sponsorship all genius is as naught.

Elevating the teaching of design and the making of objects to the same academic status as reading, writing and arithmetic will accomplish little. It is the status of the practitioner at the university level that is important and it would be unfortunate if their skills were regarded no higher than those of the ability to read a newspaper or add up a shopping bill.

What is needed is a better teaching of social history, human relationships and moral justice; in order to create a better understanding of the role of those who strive in the creative and useful work that improves our community wealth and creature comfort. The need for this is nowhere more obvious than among those who govern (by rule) our destinies.

Yours faithfully,
K A YEOMANS
306 Uxbridge Road, Rickmansworth, Herts.

Schools Council

Sir, - The Secretaries of State for education and science and for Wales have invited me to review the functions, constitution and methods of work of the Schools Council. It has been made clear that I am to consider the subject from first principles. This means that I must consider whether the functions now exercised by the Schools Council are necessary or at least highly desirable, and if so whether they could be with advantage be exercised by other existing institutions (for example central government, local government, Her Majesty's Inspectorate, examining boards) or whether it would be preferable that they continue to be exercised by a body specially set up for this purpose, such as the Schools Council.

If I conclude that the Schools Council or something like it is a necessary institution, I should then have to consider whether there was scope for improving its effectiveness.

With few exceptions the many members of the Schools Council's main committees represent collective bodies. I am in the process of seeking the views of these bodies. In addition, however, I wish to give the opportunity to other "customers" of the Schools Council's work such as individual schools and, indeed, individual persons such as teachers, parents, members of the general public to express opinions. Any of your readers prepared to do so is invited kindly to write to the Secretary of the Schools Council, Mr Stephen Crowne, Department of Education and Science, Elizabeth House, York Road, London SE1 7PH as soon as possible and preferably by the end of April.

We would be grateful for any information relevant to the above. Yours sincerely,

PROFESSOR K. WEDELL, MA, PhD
MRS J. ROBERTS, MSc, PGCE
University of London Institute of Education,
SSRC Project: Review of Research on Children with Special Educational Needs, 55 Gordon Square, London, WC1H 0NT.

Initial truth

Sir, - It is true that DES stands for Department for the Elimination of Scholarship? Yours faithfully,
D. C. FERRIS
63 Seaview Road, Heyling Island, Hants.



HIGHER EDUCATION SUPPLEMENT
200 Gray's Inn Road, London WC1N 8EZ. Telephone 01-837 1234

English culture, universities and the British disease

On the surface of public life there is no subject on which a broader and deeper consensus exists in Britain today than the urgent need to rebuild our manufacturing industry. The revival of the golden age of the Stephenson and Brunel (suitable but lightly modified by the new enthusiasm for micro, bio and all the other -iotechnologies) is the almost reactionary image that now has the rhetoric of public men and women in a vice-like grip. The stannic mills have become the new Jerusalem.

Yet underneath there is a social reality which curiously denies this almost unanimous rhetoric. In many important ways Britain in the 1980s retains a stubbornly pre-industrial set of public values. The preoccupations of political society, the values of the old professional class, the deepest and most authentic aspirations of organized labour, the private as opposed to public priorities of capital, the very image of England (not Scotland and Wales interestingly), none of these supports the creation of a vigorous entrepreneurial culture of invention and production.

In an important new book, *English Culture and the Decline of the Industrial Spirit* (published by the Cambridge University Press and shortly to be reviewed in *THE TIMES* by Professor S. B. Saul), Martin Wiener helps to place this apparent paradox in a proper historical context. His thesis briefly is that the industrial spirit in England has been in decline since the middle of the nineteenth century and in some important respects English society rejected the experience of industrialism. So the brief and incomplete reign of the northern engineers was cut short by the revival of other older, part-agrarian part-mercantile, values that had their stronghold in England south of Trent.

It is a persuasive view, more persuasive in the softer and more sophisticated version presented by Wiener than in the more ideological and more brittle version preferred by Anderson. Naim and other representatives of the new left intelligentsia. There is sound empirical evidence to support it, whether in the form of statistics of economic growth since the 1870s or the political geography of contemporary Britain. Certainly it is a useful antidote to the vapid political rhetoric of a nation committed, in heart and in mind, to industrial regeneration.

Above all, this thesis helps to explain the alarming gap between public rhetoric and private reality in Britain today. On the one hand everyone, from Margaret Thatcher to Tony Benn, from the CBI to the TUC, from the most capitalist banker to the most socialist shop steward, emphasizes and re-emphasizes the crucial importance of industrial regeneration. Their codes may be different ("wealth creation" on one side, "planned growth" on the other), their strategies certainly are different, but the goal is the same: even higher education has become entangled in this spider's web. It is favored or disfavoured according to the view taken of its relevance to this overriding national goal of industrial regeneration. All too easily it becomes a nationalized industry that produces highly skilled manpower or the R and D division of Great Britain Limited.

On the other hand there is a strange absence of practical action that would promote such regeneration. Government is still a more popular private investment than industrial capital. Public investment is a better infrastructure to cut back in the cause of "sound money". Closer to home Finlay's message goes unheeded. At times it almost seems that Britain's

political nation (from the merchant banker to the public sector shop steward taking the vice chancellor in at an appropriate place on the spectrum) adopts an essentially *rentier* attitude to the industrial society on which it depends.

This is not simply an issue external to universities and colleges and which academics can help to describe and to analyse: it is an issue in which higher education, as an important source of national culture in its intellectual forms, is actively engaged as a contributor. Almost everything that has been said about Britain, the decline in our industrial spirit and the corresponding growth in a sense of condescension to industrial values, can as easily and with only minor qualification be said about British higher education.

Indeed the parallels are both uncanny and uncompromising. In the early and middle Victorian age when the industrialism of the north and Midlands came closest to challenging effectively the hegemony of London and the south, the civic universities were established in the same challenging spirit to provide new forms of higher education. Yet just as the industrial challenge died away in the years before and after the first world war, so the creation of the University Grants Committee and of a system of uniform state grants to universities marked an important defeat for similarly radical forces within the university system and curtailed radically its potential pluralism.

'Britain's political nation, from the merchant banker to the public sector shop steward with the vice chancellor in between, adopts a *rentier* attitude to the industrial society on which it depends'

Nor is it all such ancient history. Much more recently, the "new" universities of the 1960s were created by the action of the national state rather than through local initiatives as their nineteenth century predecessors had been. The result was to extend, but also to endorse, the traditional pattern of university education. Even more contentiously the attempt, also in the 1960s, to break away from the university "mould" by establishing the polytechnics as mature higher education institutions with much clearer industrial commitments (and possibly through the expansion of the colleges of education to create a new service-oriented sector) met with only mixed success. In 1981 the universities, much less touched in their spirit by the great Robbins, expansion than many outsiders would imagine, remain the predominant sector of higher education in both numbers and prestige, and certain to continue so until the end of this century.

The contrast with the development of higher education in Europe and north America is considerable. In north America where the most open and the most democratic forms of higher education have developed, pluralism in every sense, administrative, academic, cultural, has never been superseded by national, UGC-style, orthodoxy. The result probably is that higher education is far more accessible to a wider range of students. In mainland Europe higher education has been much more successful in absorbing industrial or at any rate

modern values. In France it is the *grandes écoles*, established in the modernising spirit of the nineteenth and twentieth centuries and unambiguously committed to industrialism (although often in a semi-Napoleonic and statist guise), that sit at the apex of higher education while the traditional universities must be content with an inferior and frankly more popular role. In Germany the *technischen hochschulen* enjoy much higher prestige and so attract more generous resources than their British equivalents. In eastern Europe the enthusiasm for polytechnical education and/or grudgingly functional monotechnic higher education is well known.

Indeed this contrast between Britain and Europe goes beyond the organization of institutions and touches even the organization of learning. Here the attempts to give higher priority to the social sciences (almost as "applied humanities") and to technology have enjoyed only temporary and insecure successes. Yet the very use of such categories is an indication of the very different cultural substrates, and so an important clue to why success was so elusive. In the rest of Europe such distinctions between social sciences and humanities, and between pure and applied sciences, have much less significance attached to them.

The trouble with this interpretation of the tension between archaism and modernism in contemporary Britain is that it invites an essentially negative and passive response (Of course, a cerebral rather than a practical response is just what one would expect given the quality of British culture). It encourages a collapse into depressing determinism which brings comfort only to those with faith in alternative sources of radical change. Admittedly it helps to expose the current rhetorical enthusiasm for industrial regeneration as owing much to the frustration of the *rentier* class, public as well as private, with the declining capacity of industrial society to produce enough "rent" to maintain their desired life styles (and the parallel hypocrisy of a higher education policy that is leading just as surely to the "deindustrialization" of Britain's universities, polytechnics, and colleges).

It may even encourage useful speculation about the persistence of collective fraternity in British society, or the decay of the industrial state and rise of the informal extrabureaucratic economy, or about the limits, social and otherwise, to future growth. It can even be argued that awareness and analysis are themselves forms of action and so not to be dismissed as simply passive and negative responses. Yet the answers, to the simple but important question, what is to be done, are not necessarily much clearer.

There is considerable danger in adopting a public school view of contemporary Britain. Our economy may have been less successful than those of our closest neighbours, but by global standards it has produced great wealth. Our culture may be narrowly based, elitist, and a little archaic, but again it has not stood in the way of the creation of a society that is comparatively civilized and relatively free. Our higher education system may carry these same marks of Cain but it too has been successful in combining academic excellence that is recognized as such in the rest of the world with a more than modest expansion of opportunity. To say all this is not to appeal to complacency. Simply to emphasize that the greatest barrier to change is to imagine that obstacles are too great. That, after all, is a handy definition of the elusive British disease.

Pay heed to the shrinking globe



George Rainsford

This column has served on several occasions in the past year as a forum for discussion of the need for the West in general and higher education in the West in particular to increase the focus on the international aspect of its affairs. I would like to join in this conversation with some urgings of my own, justifying the time and the space consumed because of the somewhat different set of arguments I wish to suggest.

The argument usually presented for the need for an increase in our literacy regarding the rest of the world is the same argument as that put forward for the need to understand new knowledge in the sciences or any other field, namely, that there is more to know and we cannot remain intellectually respectable if our knowledge falls behind. The present state of our knowledge must therefore be added to incrementally.

One of the conventional ways of doing this is through many of the foreign study programmes which pick up groups of American students and faculty from the average American college campus and transplant these whole to Paris or Rome where the groups remain an American enclave sallying forth only to do the appropriate cultural touring. At a minimum, these Americans should have enough language preparation to engage the people, and thus the culture and ideas of the foreign country visited. But our national commitment to the teaching of foreign language is slipping. Even the President's commission concerned itself primarily with the needs of graduate specialists, rather than the need for our nation to spread literacy about foreign languages, culture and ideas among the citizens generally. We speak of our need for literacy as though it was sufficient that it include the Three Rs, but literacy is also a matter of knowledge of history, culture, literature, politics, and the arts, and increasingly, it must involve all of these in a non-Western as well as a Western European context. Yet that knowledge would be useless except ornamentally if it did not lead to changes in the patterns of our acceptance of the reality of other people and cultures. Knowledge is to be used not just acquired.

In this sense it is also important that our academic programmes involve more than foreign language, literature, and a course on international relations. The content of our traditional involvement with the international may at one time have been limited to the geopolitical publicly and a sense of expanded culture privately. Now, however, our lives are touched by the shrinking world at many points. Our whole academic curriculum must thus be internationalized. Language, art, history, literature, economics, political science, philosophy, and even approaches to the sciences must be presented comparatively. Our knowledge must also be integrated so that we have experts, for example, on the Middle East as well as separately on the Arabs and the Israelis. As we try to understand an historic era as it truly was, rather than from the perspective

of our own time and culture, so we must understand other places and people from the inside out, not just from our viewpoint. This is going to be particularly important as we try to see the developing nations not as pawns in the struggle of East and West but in terms of their own indigenous aspirations and needs.

The bottom line justification for this new emphasis is pragmatic as well as enlightened. Dr. David Barclay, a German and Russian scholar at Kalamazoo College, has rightly stated the case when he said that "the continued cultural vigor of Western civilization depends to an important extent on its capacity to understand itself, its limitations and its real achievements in terms of its contacts and collisions with other cultures and societies."

The issue is then not just intellectual respectability but meaningful and useful survival. This implies the recognition that we must accept the world not as our cultural biases would have it, but rather as it actually is. And from that understanding and Dr. Barclay's contacts and collisions must come some change and adjustment in our Western orientation. A commitment to pluralism presupposes some tolerance but also some accommodations and the one is as inevitable as the other is necessary, since the incidences of impact and involvement are accelerating, not declining.

What we do or fail to do domestically will also have a global visibility and consequence. Domestic policy now has international ramifications. As examples, our domestic farm policy can involve only a narrow concern with the economic well-being of our farmers, or can be seen as an evidence of our desire to feed the hungry of the world, whether of our nation or others, or of our desire to gain our way internationally by using our food production as a lever - a barrel of wheat for a barrel of oil. Likewise, our desire and ability to respond to the aspirations for larger participation in the advantages of the American life by our own minority population will be seen as a hostage of our good intentions with regard to the aspirations of the Third World.

In a way it is curious that the difference between Carter and Reagan's foreign policies is being posed in terms of the moral commitment to human rights of the former and the pragmatic commitment to national security of the latter. These not seen as mutually exclusive and can be complementary. If a sense of enlightened and pragmatic economic self-interest had directed our foreign policy in the 1960s and 1970s, it is unlikely that we would have defoliated the Vietnamese countryside and destroyed its towns and villages.

The major need for an increased focus on the international in our educational programmes is thus not for reasons of intellectual respectability or even of some guilty reactions to our inattention to the shrinking globe. Rather, it is a pragmatic response to the fact that increasingly the real pressures which we will face as a nation on our ideas, our institutions, and our resources are going to come from outside our borders and we had better be able to understand and adjust to them. It matters not if General Motors as an institution whether Chrysler succeeds or goes into bankruptcy. Japan technology has invaded Detroit as well as stolen the world market and that is the issue which General Motors must confront. The day cannot be far off when the CPEC nations will seize the initiative to remove their massive capital resources from Western banks and financial institutions and the International Monetary Fund and set up a competing international economic structure to finance the needs and aspirations of the Third World. Finally, the recent devastating involvement with Iran showed how completely the force of an ideology can overshadow the technology of the West.

The current low level of appreciation of and commitment to the international aspects of our educational programs is a shame and a disgrace as the President's commission has alleged. It is also a substantial danger which will seriously impede our ability to continue to provide useful leadership. Let alone survive in the 21st century. As the unequaled remarked that, "some people take the torch be snatched from their hands, but others stamp it out themselves." Neither need it be our fate if we truly understand the choice which is ours with regard to the internationalization of our educational programmes.